

# The Lazy Joe Sportster

The master of sheet-balsa models offers you this neat fly-about for parking lot flying. Full-Size Plans!

by Dick Struhl

● This little Cabin Sportster was conceived not to break records, win contests, or to bring out the best in craftsmen. It was designed instead for the Lazy Joe who wants to throw a model together in a short time and spend a great deal of the time just flying the ship. We happen to belong to the latter category.

Our little model represents about the minimum of work attached to constructing a flying model which will still look like an airplane, yet the design incorporates all the high performance factors usually found in a modern contest model. The only spot where the rank beginner may run into trouble is with the folding

propeller. If you feel that you are not quite up to making the folder, a free-wheeling prop may be substituted with but small decrease in performance.

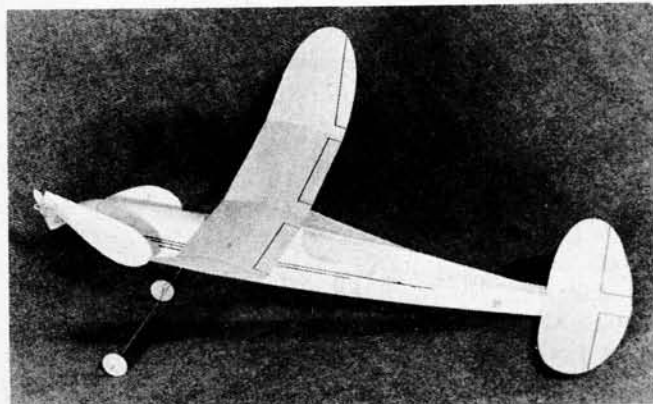
**FUSELAGE:** The fuselage is constructed first. Pin-point the outline and cut two side panels from firm 1/32" sheet balsa, as seen in the side view on the full-size plans. Next cut the necessary fuselage bulkheads from 1/16" plywood. Parts such as these may be transferred from the original plans to the wood with tissue paper. The 1/32" sheet balsa fuselage bottom is cut as seen in the top view of the plans, following the heavy outline.

Assemble the fuselage by first cementing the two side panels together at the extreme rear end. Then, run a little cement along the bottom edge of the fuselage sides and attach the bottom sheet in place. Work forward along the bottom, adding the fuselage bulkheads as you reach their proper positions. The inside of the nose is braced with extra pieces of 1/16" x 1/4" balsa, cemented cross-grain. Add the small 1/16"-square stringer between bulkhead A and bulkhead B. (Turn to Page 58)



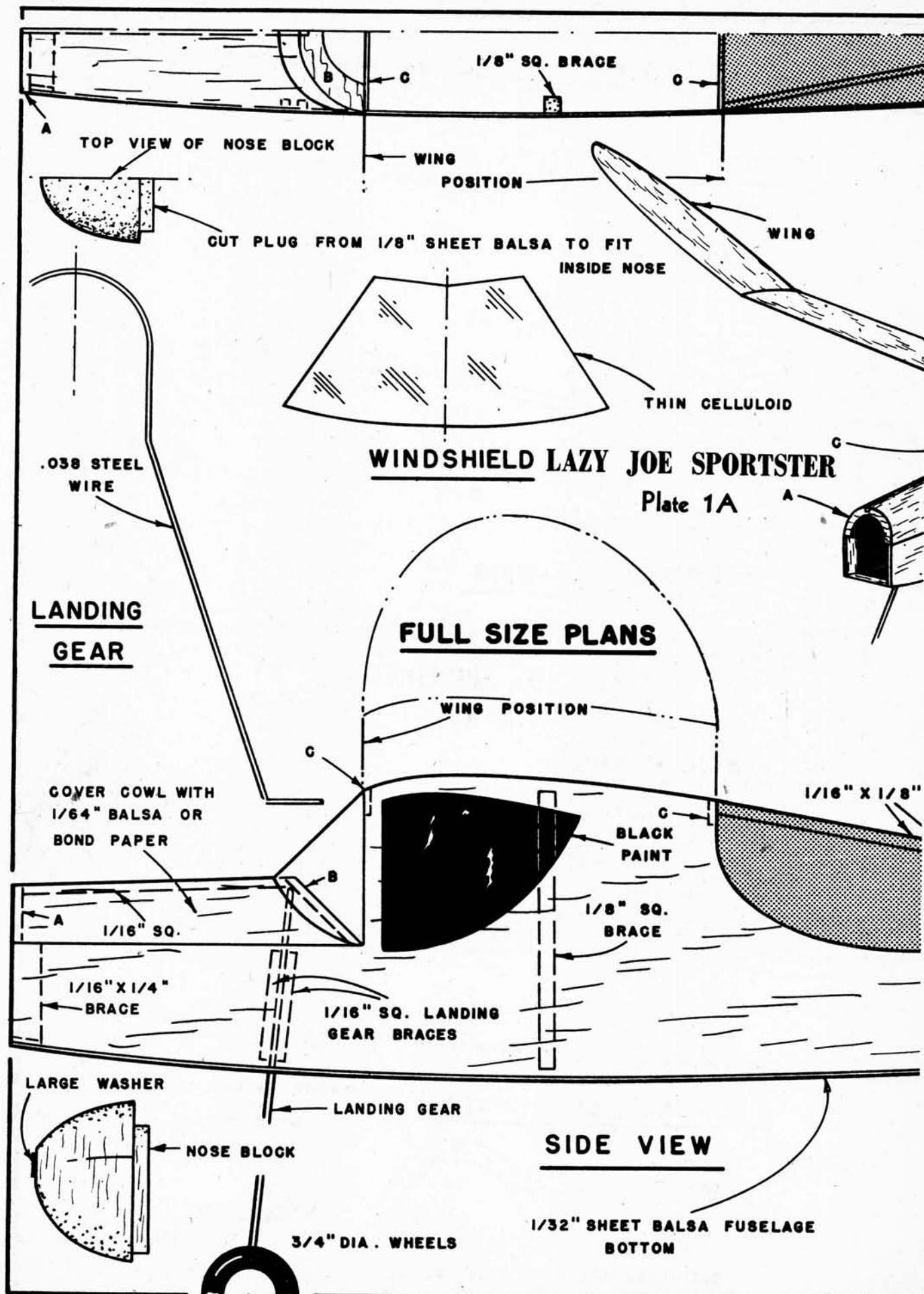
Here's a front view of the lazy constructor's sportster. If perchance you're not in the mood to waste time on that folding prop, a free-wheeling fan may be substituted, as shown on the plans.

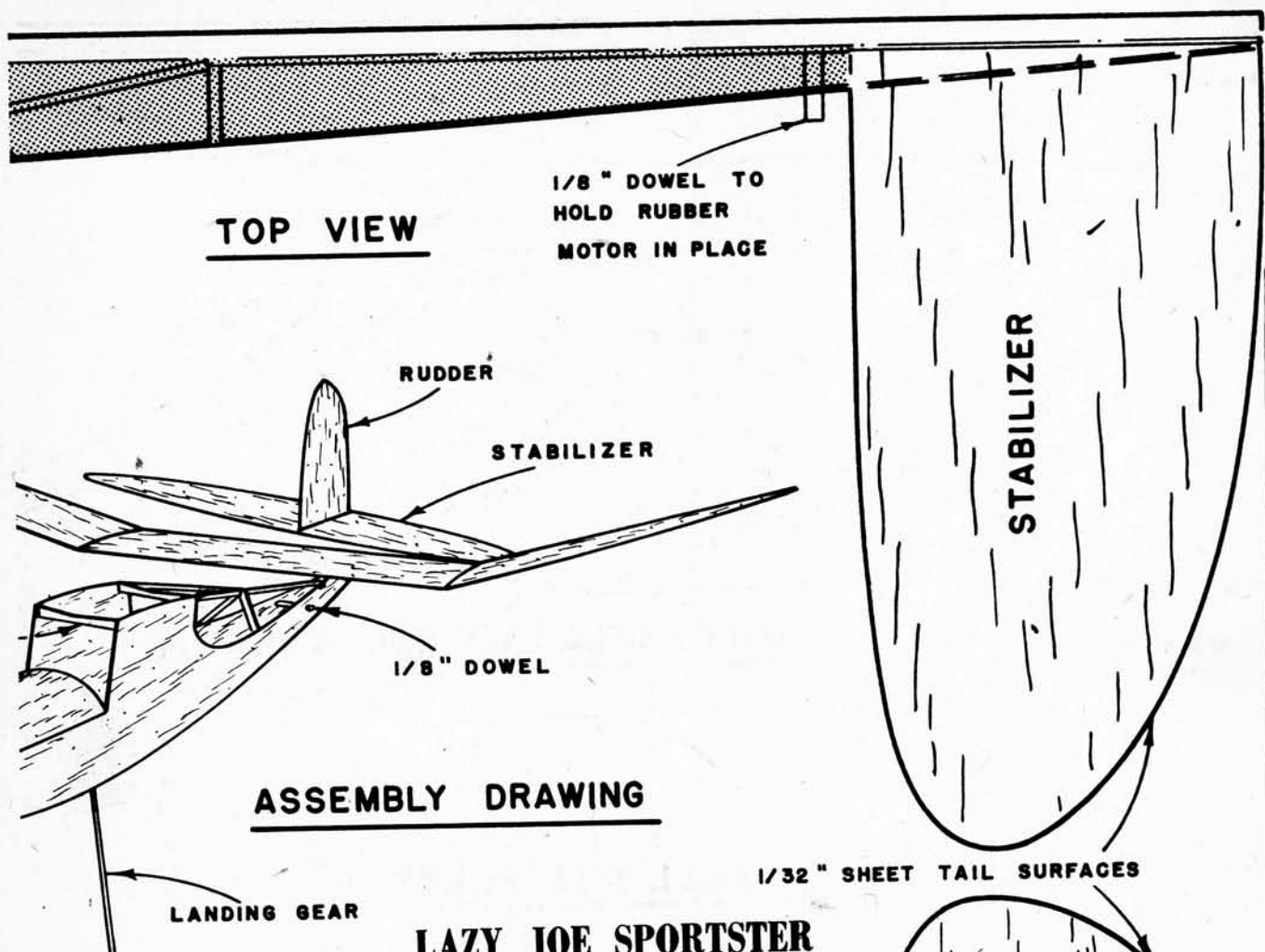
This rugged sheet-balsa ship can really take care of itself in the air. Thinned-out yellow dope and India ink lines add to its appearance.



A polyhedral break substitutes for unsightly ribs on the all-sheet wing and airfoil is obtained by brushing water over the wing's upper camber.



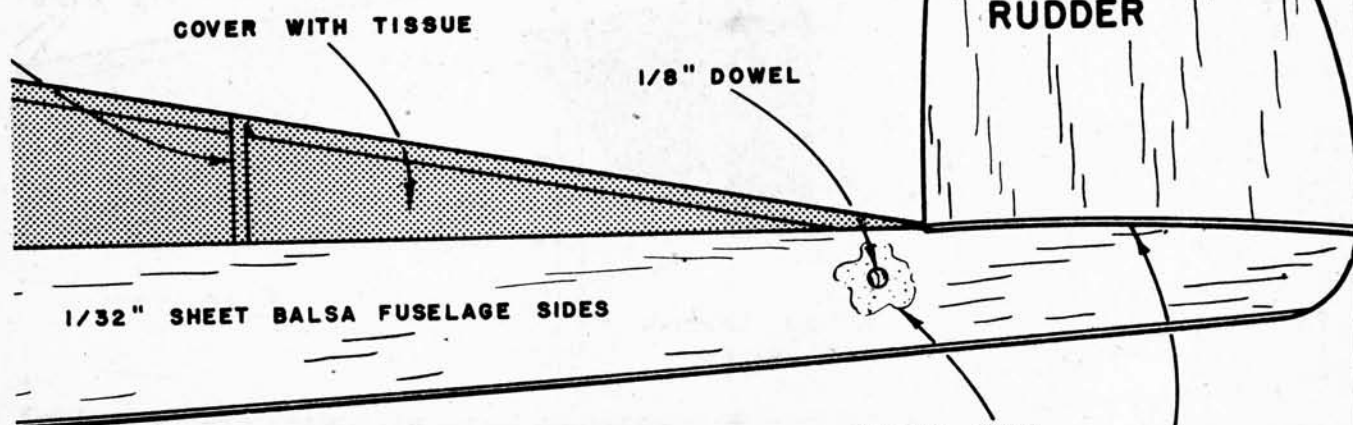




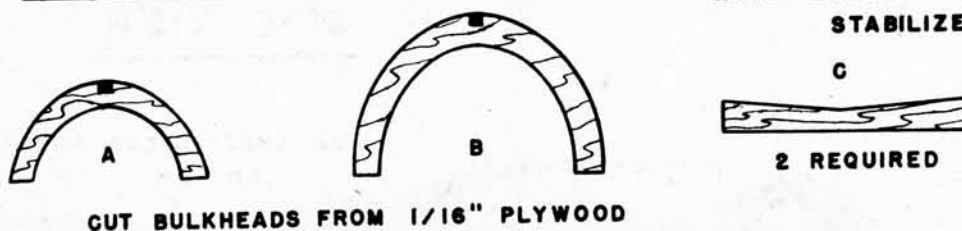
## LAZY JOE SPORTSTER

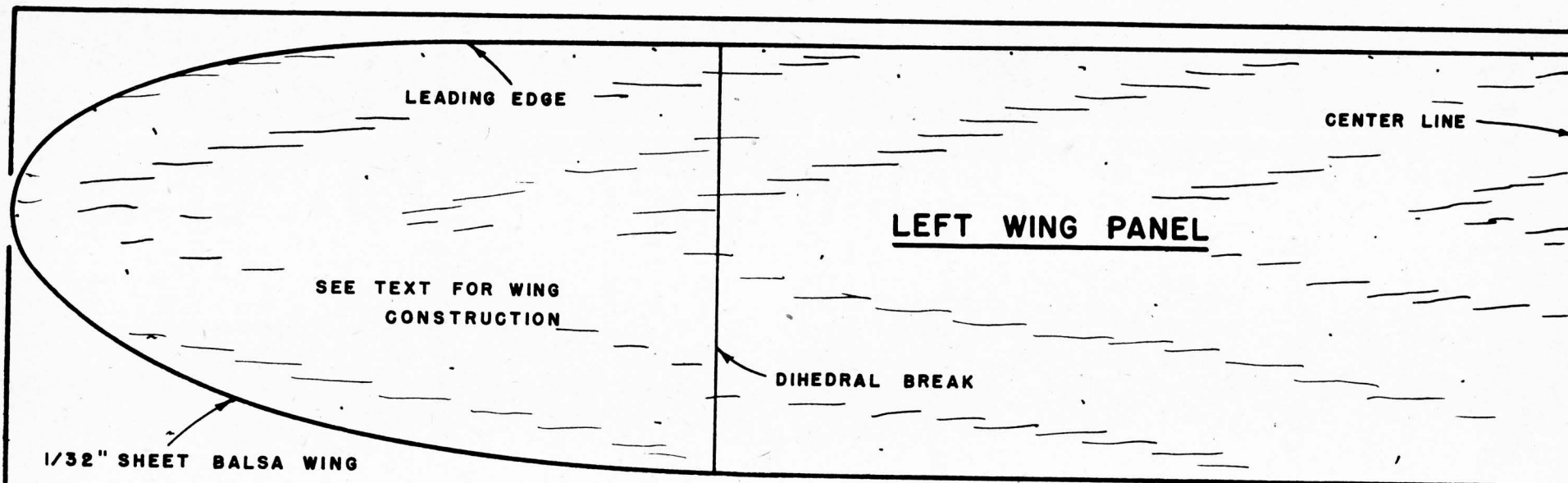
Plate 1B

### FULL SIZE PLANS



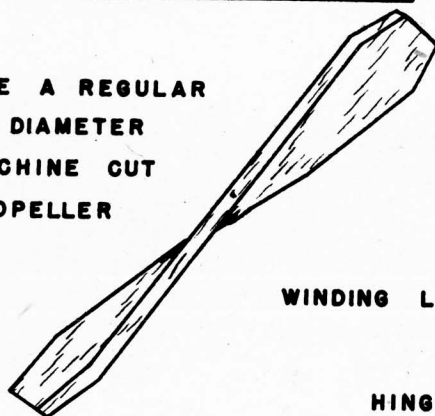
### FUSELAGE BULKHEADS



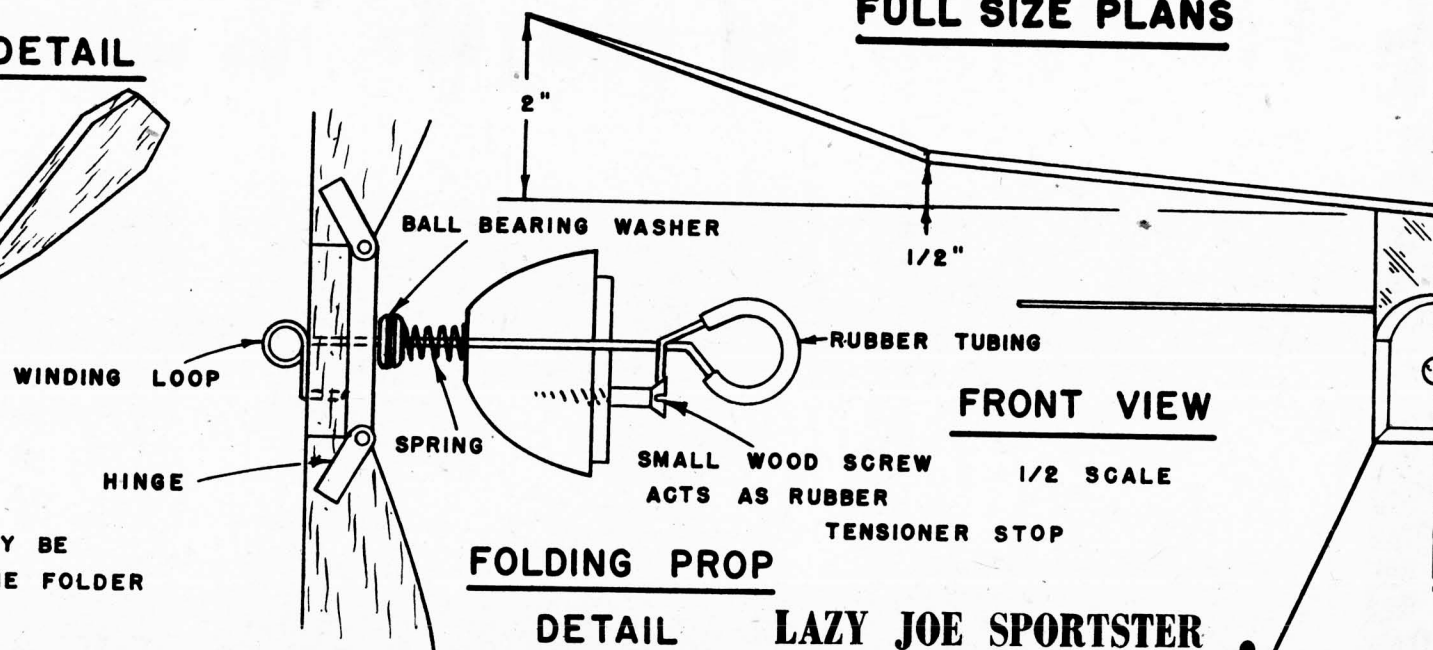


### PROPELLER DETAIL

USE A REGULAR  
8" DIAMETER  
MACHINE CUT  
PROPELLER



A FREE-WHEELER MAY BE  
SUBSTITUTED FOR THE FOLDER



### FULL SIZE PLANS

### FRONT VIEW

1/2 SCALE

### FOLDING PROP

### DETAIL

### **LAZY JOE SPORTSTER**

Plate 2

DICK STRUHL





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## NEXT ISSUE!

In Feb. 1951 FLYING MODELS, on sale January 10th, you'll find "Be Wise—Dethermalize," by Walter Schroder, explaining how, why and when to use dethermalizers in free-flight models, in easy-to-understand language and how-to-do-it photos. Order your February issue now!

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## THE LAZY JOE

(Continued from Page 14)

Now, bend the landing gear to shape from .038" steel music wire and install in position. Cement small pieces of 1/16" square balsa on either side of the landing gear strut where it runs along the inside of the fuselage side panel. Several coats of cement should be applied here. Then the nose cowl should be covered with 1/64" sheet balsa or ordinary white bond paper.

Next, a 2 1/4" long piece of 1/8" square hard balsa is cemented to the inside of the fuselage panels at the mid-chord position. This will give the necessary stiffness to the fuselage side.

**STAB & RUDDER:** Cut the stabilizer to shape from warp-free 1/32" sheet balsa and cement in position. Note that the fuselage will force a small degree of undercamber into the stabilizer. This will help avoid stalling tendencies as well as add a bit of stiffness to the stabilizer structure.

The rudder may now be cut from 1/32" sheet balsa and cemented in place. Be sure that the rudder remains at right angles to the stabilizer surface.

The small built-up structure between the wing trailing edge and the stabilizer leading edge is constructed next. Use 1/16" x 1/8" balsa strips throughout. As shown in the assembly drawing, there is an inverted "V" mid-way between the wing and stabilizer. One strip of balsa runs from the apex of this inverted "V" to the junction of the rudder and stabilizer leading edges. Two strips run from the extremities of bulkhead C to the apex of the inverted "V." Do not cover this section until the wing has been installed in position.

**WING:** The wing is relatively easy to build. Copy the entire wing plan onto a sheet 2 3/4" x 20" of 1/32" warp-free balsa, reversing left wing panel plan for the right wing panel. Cut the wing to shape and sandpaper the edges smooth. Lightly mark the dihedral break positions with a dot or two of India ink.

To form the required camber in the wing, merely brush a light coat of warm water on the top surface of the wing. Apply the water from the leading edge to a point about one inch from the trailing edge. When the water evaporates, the wing will have assumed an airfoil shape, due to the swelling of the grain on the top surface of the wing.

Now cut the wing apart and install the required dihedral. When the dihedral joints have set firmly, install the wing in its proper position. The wing is cemented to the fuselage sides and to the two small plywood bulkheads.

**COVERING:** Cover the structure between the wing and tail with a light grade tissue. You will need three small pieces; one for each side section and a triangular piece for the top.

**ASSEMBLY:** A small piece of 1/8" diameter hardwood dowel acts as the rear hook to hold the rubber motor. Drill a hole in the sides of the fuselage to correspond with the dowel position in the drawings. Several coats of cement

are smeared around the hole to give a firm anchorage to the dowel. A small inspection hole may be cut in the bottom of the fuselage just below the rear dowel to facilitate the installation of new rubber motors.

Cut the nose block to shape from a 1" x 3/4" x 1 1/4" hard balsa block. A large copper washer cemented to the front acts as the thrust bearing. Note that a plug cut from 1/8" sheet balsa to the shape of the inside of the nose is cemented to the rear face of the nose block. This will help keep the nose block in place.

**PROP:** An 8" diameter regular commercial machine-cut propeller is used on this model. You may, if you wish, carve your own prop from a 1" x 1 1/2" x 8" block. But, we have found the machine-cut variety to be quite efficient on this size model when properly trimmed, sandpapered and balanced.

As stated before, if you want top performance you should convert the propeller into a folder. The procedure is shown in the plans. If you feel that the extra performance is not worth the work, then by all means equip the prop with a simple free-wheeling device such as that put out by Jasco.

**MOTOR:** Power for this model consists of from six to ten strands of 1/8" flat T-56 well lubricated rubber. The weight of your finished model and the prevailing weather will determine the exact number of strands needed.

To complete the model, add the 3/4" diameter hardwood wheels to the landing gear. A drop of cement at the ends of the axle will retain them in place. The windshield is cut from thin sheet celluloid to the pattern shown in the plans, and installed in place.

Spray a light coat of water on the tissue-covered portion of the fuselage. Allow to dry and shrink the paper, then apply two thin coats of clear dope. To avoid the washed-out look of raw balsa wood, brush a coat of yellow dope, cut 1:5 with thinner, over the entire model. This will seal the wood, add a bit of color and yet not warp the surfaces nor weigh too much.

**FLYING:** Flight adjustments should present no difficulties. Minor adjustments may be made by tilting the thrust line down and to the right and adding small amounts of weight to the nose or tail. Fine adjustments are made by warping the tail surfaces. The model gives best flights when circling to the right under power and to the left in the glide.

After you've had an opportunity to build and fly the Lazy Joe, we'd appreciate your sending us a postcard, c/o FLYING MODELS, 215 4th Ave., N. Y. 3, N. Y., letting us know how you like it.

### BILL OF MATERIALS

(Balsa unless otherwise specified)

- 2-1/32" x 3" x 24" (medium)....Wing, tail surfaces, fuselage
- 1-1/16" x 1/8" x 24" (medium)....Fuselage turtle back
- 1-1/16" x 1/16" x 12" (medium)....Nose stringer and landing gear brace
- 1-1/16" x 1/4" x 6" (medium-soft)....Nose brace
- 1-1/8" x 1/8" x 6" (medium-soft)....Fuselage side brace
- 1/16" plywood; Tissue paper, Celluloid; .038" music wire; 1/8" dowels; 8" machine cut propeller; 3/4" diameter hardwood wheels; Dope; Cement; 1/8" flat T-56 rubber; Scrap balsa nose block.

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