



By the author

# Blohm Voss 141-B

Fine-flying asymmetrical German fighter makes great 049-powered trainer and sport model.

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OUT of WW II came a great variety of experimental aircraft. The BV 141B represents what was obviously one of Germany's farther out excursions into new design. The brainchild of Dr. Vogt, the asymmetrical aircraft went beyond the experimental stages and actually saw combat service on the Russian front.

Built in 1938, this fighter-bomber carried light armament by today's standards. Two fixed machine guns were supplemented by two movable, crew-manned machine guns, bomb load was four 110-lb. bombs. The crew pod carried four men including the pilot, while the main fuselage contained the 1600-hp BMW 801 engine. Statistics, converted from metric dimensions, were: wing-span, 57.3 ft.; length, 45.8 ft.; speed, 241 mph at an altitude of 11,500 ft.

The semi-scale 049-powered model is of simple balsa construction. The scale chosen resulted in a fairly large, stable, easy-to-fly model. One of the new McCoy 049's with the tank-mount combination was used, but any engine of similar displacement and mounting is suitable.

Epoxy resin (you can use your favorite cement or glue) was used to join all assemblies for durability. There are few joints. Make them all close-fitting, using the epoxy sparingly for maximum strength and lightness.

Wing: Trace the wing outline from the top

view onto the soft-balsa wing material and cut out the wing. Cut the  $\frac{1}{4} \times \frac{1}{4}$ " groove for the landing-gear mount into the bottom surface of the wing panel. This can be done on a table saw, or by cutting along the two outside lines with a modeler's knife and chiseling out the remaining center wood.

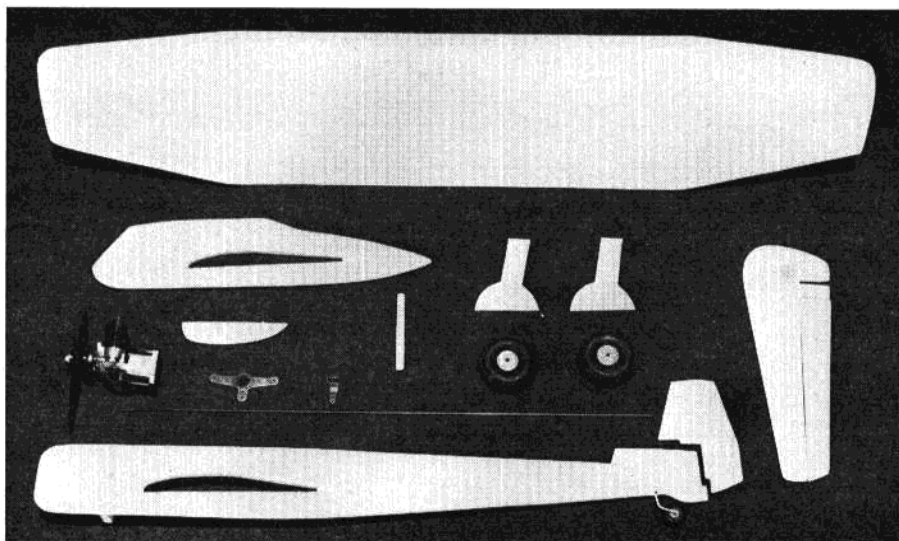
Completely carve and shape the airfoil before cutting off the wings to add the dihedral. Using a razor plane or long knife, roughly shape the upper wing to the airfoil section shown on the side view. Starting with coarse garnet paper and using progressively finer paper, sand the wing airfoil to its final shape. Round off the wing

tips. When the airfoil is complete, cut off the outer wing panels at the dihedral parting lines shown on the top view.

To reassemble the wing, place the center panel on a flat surface and add weights to hold it in place. Set the outer wing panels in place and block them up to 1" dihedral at the tips. Carve, sand and fit the joint surfaces to the proper angle to eliminate all cracks at the dihedral joint. Epoxy the outer panels into place.

Make only the two upper bends in each landing-gear wire. Drill a  $\frac{3}{32}$ " hole through each end of the hardwood landing-gear

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Author used the new McCoy-Testor 049. Rewind-starter-equipped, it comes with the tank-mount. Engine mounting method is unique and suitable for any profile model.

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mount at the locations shown on the plan. For each gear wire, slide the longer leg into place on the mount, then mark the exact location for the second hole. Drill two more holes for the shorter wire ends and slip the gear into place. Make the final wire bends at the end where the wheels will slip on. The hardwood mounts with the wires in place now can be epoxied into the wing slot.

**Fuselage and Pod:** Trace the outlines onto the  $\frac{1}{4}$ " balsa and cut out. Sand completely, rounding off all edges, except the area where the stabilizer will sit. Cut out the notch for the hardwood tail-wheel mount. Tack glue the hardwood into place and round it off to the fuselage contour. Cut the hardwood loose again and fit the tail-wheel wire into it. Bend and fit the wire in the same manner as the main gear. Epoxy the wire and hardwood into place.

Next make the fuselage cutout for the wing. Cut out the rectangular section which runs along the very bottom of the wings and straight down from the leading and trailing edges, as marked on the plan. Then carve the upper airfoil shape into the fuselage, slipping the wing into place frequently to check progress. When the wing and the rectangular fuselage section fit properly, epoxy them into place, keeping everything squarely aligned. Fit the pod onto the wing in the same manner.

Make and install the engine mount and brace. The engine mounting holes can be drilled much more easily before the mount is epoxied to the fuselage.

**Empennage:** Cut out the fin, rudder, stabilizer and elevator parts. Sand to a symmetrical, streamlined shape. Select a control horn with  $\frac{1}{2}$ " center to hole spacing, and mount it on the elevator. Attach the elevator to the stabilizer using figure-eight carpet-thread hinges, or other preferred method. Epoxy fin and rudder into place, with at least  $\frac{1}{4}$ " offset as shown. At this point make the plywood line guide and install it on the lower surface of the wing.

**Finish:** The wing and pod fillets were made of epoxy putty, although a lighter, faster-working material, such as plastic balsa could be used. The model pictured had three brushed-on coats of sanding sealer, rubbed generously with fine sandpaper between each coat. The sprayer was used after this, beginning with three coats of clear dope. The swastika and crosses were made by masking and painting, but perhaps could be added more easily afterwards by making cutouts from decal material.

The pod windows were made by painting the entire area white, then covering the white with masking tape while the other colors were added. Later the tape was stripped off and small black plastic tape ribbons used for the window pane dividers.

Three coats of the basic sky-blue color were sprayed on after the clear dope. Then a single coat of dark blue was applied in a camouflage pattern on the upper surfaces. At this point any masking is removed and three coats of clear sprayed on. When thoroughly dry, apply rubbing compound, then spray a final coat of clear dope, unrubbed for maximum fuel-proofing.

The two tones of blue on the original can be mixed using Corsair blue as the darker color, adding white to obtain the lighter blue for the base color.

**Controls and Final Assembly:** Bend the  $\frac{1}{16}$ " wire pushrod to shape and install it at the same time the bellcrank is installed. Make a pushrod guide either from small wire or by clipping the head off a large safety pin and sliding the pushrod through the eye. Select a bellcrank with a 2" line spacing and install it below the wing, using epoxy on the bolts and nuts. Let the pushrod guide hang loosely until each pushrod end is installed, then install the guide into the fuselage, midway between bellcrank and elevator horn.

Add approximately  $\frac{3}{4}$ -oz. outboard wing weight. Use very light (.010 dia.) wire lead-outs. Install wheels and wheel skirts. Veco wheels were used on the model shown. Mount the engine and tank. Standard  $\frac{1}{2}$ A dacron flight lines are used. For best model durability, fly with care and precision, avoiding all unnecessary contact with the ground.

### Materials List

$\frac{1}{2}$  x 6 x 36", soft balsa, wing;  $\frac{1}{4}$  x 3 x 36", soft balsa, fuselage, pod;  $\frac{1}{8}$  x 3 x 24", soft balsa, stab, rudder;  $\frac{1}{4}$  x  $\frac{1}{4}$  x 10", hardwood, LG mount;  $\frac{1}{4}$  x 1  $\frac{1}{2}$  x 2  $\frac{1}{2}$ ", plywood, engine mount;  $\frac{1}{8}$  x 3 x 4", plywood, line guide, braces;  $\frac{3}{32}$ " dia. wire, landing gear;  $\frac{1}{16}$ " dia. wire, pushrod; .020 x 3 x 5" aluminum, wheel skirts (optional).

Hardware items, such as wheels, controls, engine, and finishing materials, are not included in the materials list, but are shown on the plans or described.