

# Halberstadt D-II



This is the Halberstadt D-II flown by the Baron while a member of the famous Kampfeinsatzkommando Vaux in 1916.

Baron Ernst von Althaus made the plane famous. With it he won his Blue Max. He was so skillful that pilots thought him reckless!



Although rather flimsy looking, the Halberstadt was one of the WW-1's toughest fighters and could withstand very high 'G' loads. Our .29 powered controliner is a solid semi-scale performer.

## WALTER MUSCIANO

WHEN the Fokker Eindecker proved obsolete in the spring of 1916 the German high command feverishly sought a replacement from three aircraft firms: Halberstadt, Fokker, and Albatros. The Halberstadt design was the first to reach the front in early 1916 followed by the Fokker D-7 and then the Albatros. The latter eventually overshadowed its competitors. The Halberstadt biplane fighters ranged from the D-I to the D-IV but the most popular seems to have been the D-II which was flown by such famous aces as Wintgens, Buddecke, Boelcke, von Richtofen, Berthold, and von Althaus.

The D-II was flimsy looking, but extremely rugged in the air and could withstand prolonged dives which is something that many of the designs of that period could not. Powered by a 120-hp Mercedes, liquid-cooled, six-cylinder engine, the D-II attained a speed of 90 mph. Normal armament consisted of a single Spandau machine gun mounted atop the fuselage, however many flyers used two guns.

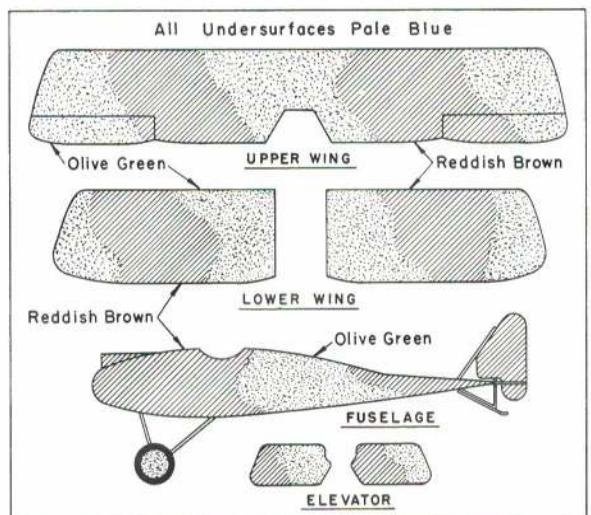
Like many early German planes, the Halberstadt D-II left the factory with wide variations. Exhaust stacks, ailerons, inspection panels varied in shape from batch to batch. Our one-inch-to-the-foot, control-line model duplicates one of the D-II fighters flown by Ernst von Althaus when he was a member of Kampfeinsatz-

kommando Vaux. Engines from .15 to .23 can be used. This design has a relatively long tail-moment arm which tends to eliminate sensitive controls but will probably make the model balance tail heavy. The fuselage rear and the tail surfaces should be lightly constructed. A heavy, but not too powerful, engine will also help. The full-size craft had no stabilizer or fin; the entire surface was movable. This may be troublesome for the novice with excessive sensitivity of the controls, therefore an enlarged non-scale tail with conventional elevator stabilizer configuration has been illustrated for those who are interested only in stable care-free flying. Since this project is

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Of interest here are the rigging wires, fuselage inspection panels, and cabane struts. Right: Camouflage typical only on the Baron's plane.



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## RC World

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ful flights, the plane crashed in a violent right-hand spiral; suspecting radio problems, Dave wasted a lot of time checking his equipment, before he finally realized that his trouble was aerodynamic. To cool down the hot little Cox .01 engine, Dave had installed a relatively heavy plastic 4½ x 2½ propeller. Gyroscopic forces of this prop would overcome the natural stability of the little plane in a right-hand spiral—and down she'd come! Dave then carved a much lighter wooden prop of the same size. This cured the trouble completely. At the time his photo was in the mag, Dave was using an Otariem receiver, a 50 ohm relay as a propo actuator, and Eveready S-76 silver-oxide cells for power; plane weight was 74 grams. Since then he has installed the tiny Bentert receiver and actuator, and uses a pair of 50 maH nickel-cad cells; this installation dropped total weight to 64 grams; with its 63 sq. in. wing area, Dave says the plane is a real gentle flyer. Even at 74 gms the plane was as easy as a Schoolboy to fly—except for that fatal spiral!

'68 Stunt Rules. Radical changes have been made in the stunt rules for the 1968 season. There will be no breakdown as to number of controls, but the new classes will be separated by number and difficulty of maneuvers. Class A will include eight of the present Pattern stunts. Class B will have 11 such stunts. Class C will consist of eight mandatory maneuvers, plus ten out of a list of 18 optional maneuvers. Flyers will be advanced through the Classes as has been done in the past Novice/Expert split—three wins (first, second or third) in any class advances flyer to next higher Class. The RC Contest Board members voted to adopt the 1967 NMPRA rules for Goodyear Pylon, plus the 600 sq. in. "Continental" category; the Board felt that some means should be developed to slow speeds of the Goodyear planes. Builder of the Model rule will henceforth apply only to those events where points for appearance and workmanship are a factor (here come the Buy-and-Fly boys!). Undecided at the moment (no votes received from two districts) was whether to apply the present Novice/Expert split to the new Pattern event setup.

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aimed at the more experienced modeler we will describe only the unusual aspects of its construction.

**Construction:** The upper wing is one piece. The plywood joiner is cemented to the leading edge pieces, automatically forming the correct dihedral. Do this before the ribs are cemented in place. Some ribs are ¼" balsa. The lower wing plywood tongue fits into the slot in the fuselage side. The leading and trailing edges are trimmed and sanded to final shape after complete assembly of the wing. Wings are silk covered; do not forget the weight in outboard tip.

Landing gear is secured to plywood bulkheads with "J" bolts or it can be sewn in place. Cabane struts are wire; secured to the plywood bulkheads with round-head wood screws. Strut attachment to the wings is by means of electrical soldering lugs. These banjo-shaped fittings are clamped over the ends of the cabane and interplane struts and soldered in place. They are then

bent to fit the wing camber as shown. Wood screws hold the soldering lugs to the strut supports which have been rigidly built into the wing structure before covering. Pilot holes are drilled into the supports to receive the screws. Cement is also applied to the strut attachment points. Recess the soldering lugs and wood screws into the wing.

The scale elevator halves are cemented to the ⅛" dowel joiner only after the two brass washers and the short length of metal tubing have been slipped on the dowel. When dry, the tubing is cemented against the fuselage rear. Cut a slight notch in the fuselage rear to match the tubing. Wrap several layers of silk and cement around this attachment to insure a firm installation. Fill in the upper and lower elevator surfaces in way of the dowel with Plastic Balsa and sand smooth when dry. Control horn is cut out and bent from scrap aluminum.

Do not forget to install the fuel tank before the fuselage top and bottom are added. Also add the plastic tube filling, vent, and feed lines.

All wood parts receive at least six coats of sanding sealer. Sand lightly after each coat is dry. Many Halberstadts were finished in clear dope or varnish which gave them an overall light tan or buff color. Others, like the plane flown by von Althaus, were camouflaged in irregular patches of olive green and reddish brown on all sides and upper surface, while the bottom was a very pale blue. Clear dope the silk-covered surfaces with about six coats before the color is applied. Markings are cut from Wondurcal solid-color, fuel-proof decal sheet. Silver thread or fine wire can be used for rigging.

The scale engine intake and exhaust piping, as well as the water pipe, are bent from ⅛" dia. solder. This adds some needed weight to the nose. Radiator and fuel tank are cut from stiff paper, such as an index card, cemented in place, and painted. Radiator should be a brass color, the tank following the colors of the plane. Scale wheels are available from Miniature Wheel Co., P. O. Box 2647 Firestone Park Station, Akron, Ohio for \$1.50 postpaid.

**Flying:** It is advisable to fly from smooth surfaces, such as a parking lot, school yard or packed hard earth. Line lengths depend upon your experience. Start with something like 40 feet and graduate up to longer lengths if desired. This is not a windy weather flyer so wait for a fairly calm day before you take off on that "dawn patrol."

**Paint Mixing Instructions:** 1) Add a few drops of Curtiss Blue at a time to the Swift White until a very pale blue results—use for underside of wings, tail, and fuselage; 2) Mix equal parts of Stearman Red and Stinson Green to make reddish brown; 3) Add a few drops of jet black to the remaining Stinson Green to make it "dirty"; 4) Use the Curtiss Blue for the water pipe which runs from radiator to engine; 5) Add pale blue to the black to make dark gray for engine and exhaust.

## Count Down

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short-duration high-thrust booster coupled to a stop-stage sustainer that burns for 10 seconds; the bird went out of sight with the top stage still under thrust, the trackers locked up at 90-degree elevation, and the bird must have hit over 8,000 feet. These large engines are very powerful, very expensive, and meant only for the advanced model rocketeer who has plenty of room to fly in, but they are needed because they provide the means to do the

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