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F-82 Twin Mustang

A control-line show-stopper, this profile F-82 is as startling in appearance as the real one. It's easy to build, too!

BUILT by North American Aviation Inc., and designed as a long-range, high-performance fighter-bomber, this twin-engine, twin-fuselage aircraft was test flown July 6, 1945. Our model is a profile, scaled one inch to the foot, giving a wing span of 52.5". Two 35 McCoy powerplants provide more than enough get up and go to give all the thrills one could want in an aircraft.

Used as a show plane, it is a crowd pleaser of the first order. Painted all black with white trim and rubbed out to a high polish, this plane becomes something one enjoys having.

The airfoil shown was used because of the anticipated weight of this type of model. For those who want more than level flight and loops, a symmetrical airfoil may be substituted.

Fuselage: Use hard-grade balsa 6 x 36 x ½ stock for the fuselage. Cockpit and airscoop are butt glued from scrap (if cockpit and airscoop included use 7¼ x 36 x ½ stock). The fuselage is tapered from rear of cockpit to rudder, per the drawing. The ⅛ hard-grade plywood doublers extend from the nose to halfway past the wing leading edge.

Motor mount material is ½ x ¾ x 6, hardwood. Distance between the mount bearers depends on the motor used and crankcase size. The 2¼ spinner is a Veco product.

The 35 powerplants are mounted with the cylinders to the outside of circle. Drill ⅛ holes and use 4-40 lock nuts and bolts. (Blind nuts may be substituted.) On some engines the needle valves will need to be in the top position, for ease of making adjustments. Side mount 4-oz. tanks, using strap-type hold-downs. Fuel filters are an extra safeguard for reliable and smooth running.

Make left and right ⅛ landing gear struts for 2" wheels (Perfect or Veco). Also, bend left and right tailwheel struts, using 1/16 wire set in hardwood. The hardwood is recessed into the fuselage. Make two metal main-gear skirts. Attach them with nylon clamps.

The vertical tails are 7½" high. Use 3/16 thick balsa, rounded as shown. The rudder is tapered and offset to outside of circle to maintain line tension.

The horizontal stabilizer is 3 x 14 11/16 x ¼ balsa. Elevator is 1½ x 14½ x ¼, tapered. Note that the horizontal stabilizer is countersunk into the vertical stabilizer 3/32 for extra strength. Distance between one vertical stabilizer and the other vertical stabilizer is 14.5". Make figure-eight elevator hinges from waxed string.

Wing: The center section rib length is 10". A standard lifting airfoil is used. A symmetrical, stunt airfoil may be substituted for the full pattern. Cap strip the ribs with ¼ x 1/16 balsa. The ¼ x ¼ main spars are located 3½" from the leading edge, the single rear spar 2⅜ from trailing edge. Use hard ¼" sq. balsa for the leading edge. The wing's 1/16 sheeting butts against the leading edge and continues rearward, overlapping each main spar. Use medium to medium-hard sheeting on the wing. Top and bottom

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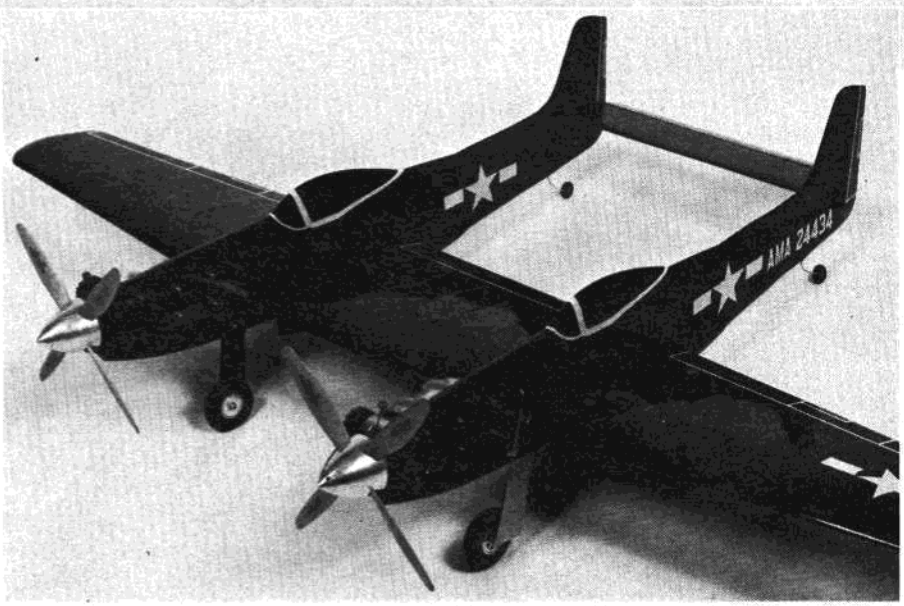
In flight, with its two 35s snarling, the Twin Mustang has maximum appeal. Clubs take note. It is an ideal demonstration model.



Four-bladed props are a plus. To construct — cement two regular wood props together, using a half-lap joint and epoxy. Carefully check the balance and true running of the prop tips. Wing is the only built-up component; the others are constructed of sheet stock.

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trailing edge is 1 x 3/32. Incorporate 1½ dihedral at each wing tip. Add 1½-2 oz. of lead weight to outboard wing, buried in the solid wing tip.

Bellcrank is a standard 2" heavy-duty type. Note that it is set in reverse. This places the pushrod (3/32) next to the left fuselage. The plywood bellcrank mount is epoxied to the bottom main spar, and butted to left fuselage center wing rib. Locate a guide eyelet halfway to elevator to prevent bowing of pushrod. Lead-out lines are swept back slightly, as normal on all U-control models.

Use plenty of balsa filler on all solid balsa components before the final assembly. Silk the wing and apply a filler coat over the silk before final assembly. Check all parts for a correct fit and alignment. Use a slow-drying epoxy on all final joints for strength. For *extra* strength, make epoxy fillets at wing roots and tail roots.

Finish: The grade of finish depends upon the builder. The finish I used is as follows: three filler coats, full strength, and a lot of sanding between each coat for all the pre-assembled parts. Wing is then silked and six coats of dope applied with sanding between each coat. At this time, apply three more coats to the fuselage and tail assembly. Total overall, is six coats. The model then is assembled. Spray on a coat of black (finish color) five times, applying three coats at each spraying — total of 15 color coats. Let the finish dry several days between these spray sessions. Also lightly sand with 350 grit sandpaper before each session. Rub out and wax for the final high polish.