

Building the Hawker Merlin

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POPULAR AVIATION

THE Hawker Merlin is a new addition to the British Air Force. High speed plus real streamline make this attractive model an exceptional flyer. We know you will enjoy every minute in the construction of the Hawker Merlin.

COLOR SCHEME

Entire model, silver with exception of the front part of fuselage, which is covered with Master Metal Unifoil.

CONSTRUCTION OF FUSELAGE

First, place waxed paper on top of plan to prevent parts from sticking to plan. The fuselage sides are built from 1/16-inch square balsa. The longerons, verticals, diagonal braces, etc., are held in place until securely cemented, by inserting straight pins on either side of strips whenever needed.

When the two sides are completed, the cross-members are cemented into their proper locations. Check carefully front to rear for alignment. Cut the formers from 1/16-inch sheet balsa and cement in their respective positions as shown on the plan.

The positions of all stringers is clearly shown on the formers. See plan. Work stringers from front to rear and check carefully to see that they have the correct spacing.



This realistic model of the Hawker Merlin, when completed, will be a reason for satisfaction both in appearance and in performance. It is an exceptionally fine flyer.

CONSTRUCTION OF WINGS

Cut all ribs from 1/16-inch balsa. Pin the spar in position on the plan. Now cement ribs in their proper locations. The leading and trailing edges are cut and sanded to shape and cemented to the ribs.

The panels carry movable ailerons which are a great help in controlling the flights. Make wing tips from 1/16-inch thick balsa. We highly approve of this

type of wing tip, because it is much easier to construct and neater in appearance.

CONSTRUCTION OF ELEVATOR AND RUDDER

These are built from 1/16-inch square and flat balsa, and are constructed on the plan. Their construction is very simple, therefore no trouble should result here.

FILLETS

We have eliminated carving of balsa wing fillets, and have used instead stiff paper wing fillets. To assure proper fitting, a little time is required for trying and fitting fillets to fuselage.

LANDING GEAR

Carefully construct all members to get required strength for struts. All details are carefully explained on plan.

OIL COOLER AND RADIATOR

Build these up as shown on plan. Carve oil cooler from solid piece of balsa wood. The radiator is built up and covered with Master Metal Unifoil.

COVERING THE MODEL

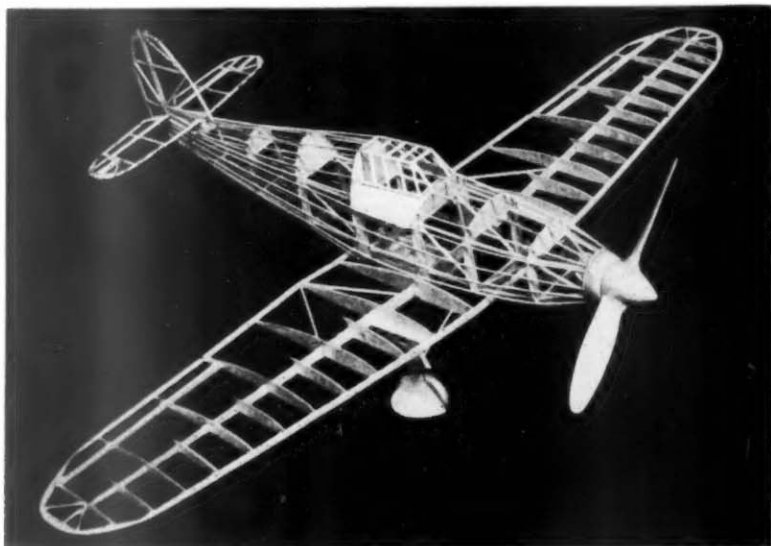
Apply tissue to the various framework members, using a light grade of model airplane dope to fasten it to the outer edges. Stretch tissue as tightly as possible to remove all wrinkles. When edges have dried, apply coat of water to tissue.

After all water has dried completely, tissue will become taut. May we suggest that you pin wings, elevator and such to a flat surface to keep from warping.

Apply Master Metal Unifoil over front part of tissue covered model.

ASSEMBLY

After the various parts have been com-
(Concluded on page 52)



Here is the completed framework of the Hawker Merlin, a photo which should be used in connection with the drawings on the following pages.

pleted, cement them to their proper locations. All details, such as rivets, numerals, etc., are drawn on completed model with pen and ink. It is very important that you spend a little extra time with details, for all details make an attractive model.

TESTING AND FLYING

Two types of propellers are used on this model. One, which has a wide blade, is made of fiber. This type of blade causes the motor to turn at less r.p.m. and greater flights result. By twisting the blades the pitch can easily be adjusted.

The balsa scale propeller is used for exhibition purposes only. Six strands of one-eighth flat rubber are sufficient to fly the model. With the rubber motor and

flying propeller in place, gently launch your model over tall grass. By this method, you can see if your model is properly balanced.

It should be borne in mind that all of the adjustable control surfaces such as the ailerons, elevators and rudders must be in proper alignment for flight. If the rear edge of the elevator is depressed, then there will be a tendency toward diving while the reverse action will be true with an upward curve of the elevator.

The ailerons are used principally for overcoming the torque of the rubber motor, depressing on aileron slightly will cause that end of the wing to rise, but this will also lead to some adjustment of the vertical rudder.