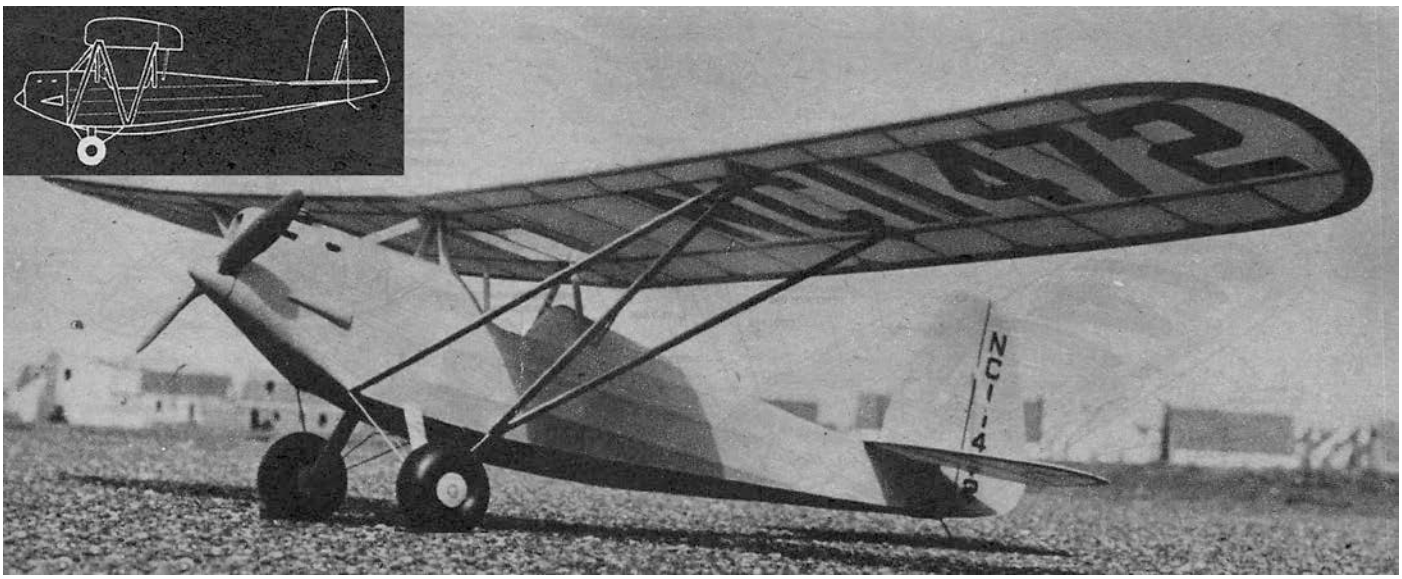
Heath Midwing - Parasol



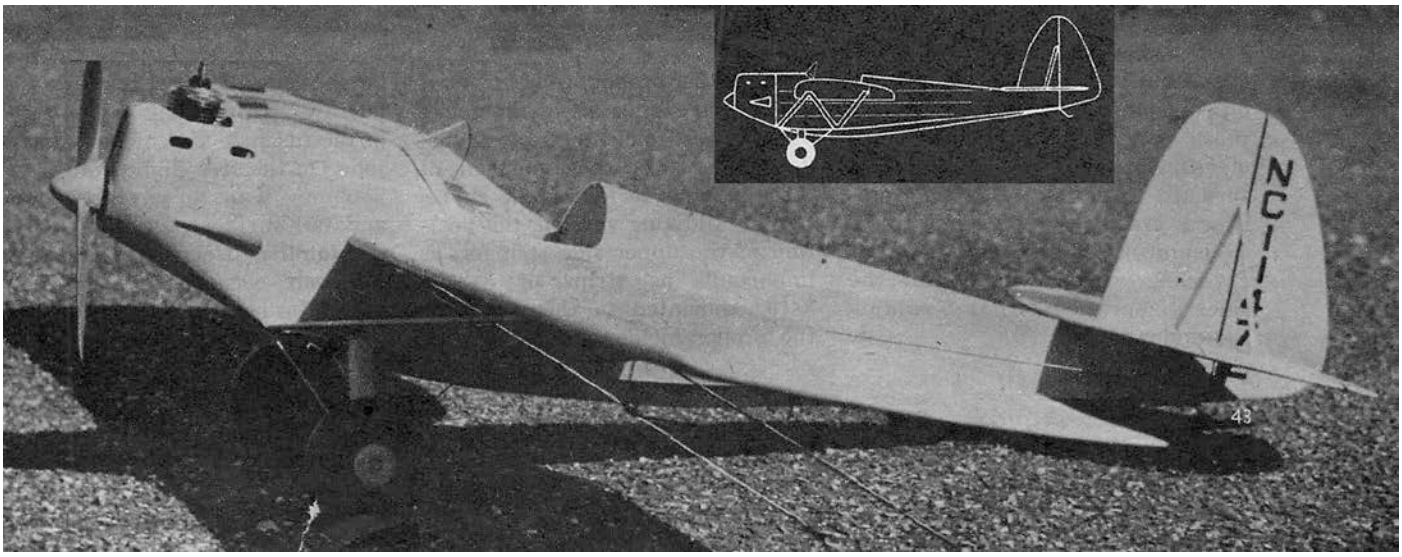
Shades of the Thirties! Look what's here: Ed Heath's famous Parasol and the not so well known Midwing job. By Paul Plecan.

Take your choice both the Parasol and Midwing are good performers. In the search for outstanding scale models, one is apt to overlook many old-time designs which are excellent for both U control and free flight use.

In its day (the early Thirties), the Heath Parasol was the most famous single seat light plane made. Available in finished or kit form, the Parasol saw extensive use, as variations fitted with skis, wheels, or floats enabled it to be flown just about anywhere. A later version, the Midwing, became very popular due to its compact size and greater speed. Still using the .same basic framework, the Parasol was modified again, this time emerging as a biplane glider, the first glider to perform the loop. Such was the genius and diversity of Ed Heath, a true pioneer of the light plane.

The Parasol makes a fine free flight model, and the Midwing seems to be the answer to a stunt man's dreams. The U-controlled Midwing can be powered with any engine within .045 to .099 cubic inches displacement, and, with a little "beefing-up", a .19 or .23 can be accommodated.

In the latter case, however, it should be noted that the nose is quite small in size and a .19 or .23 may be too tight a squeeze. (A scale model looks so much better when the engine is partly or fully cowled in).



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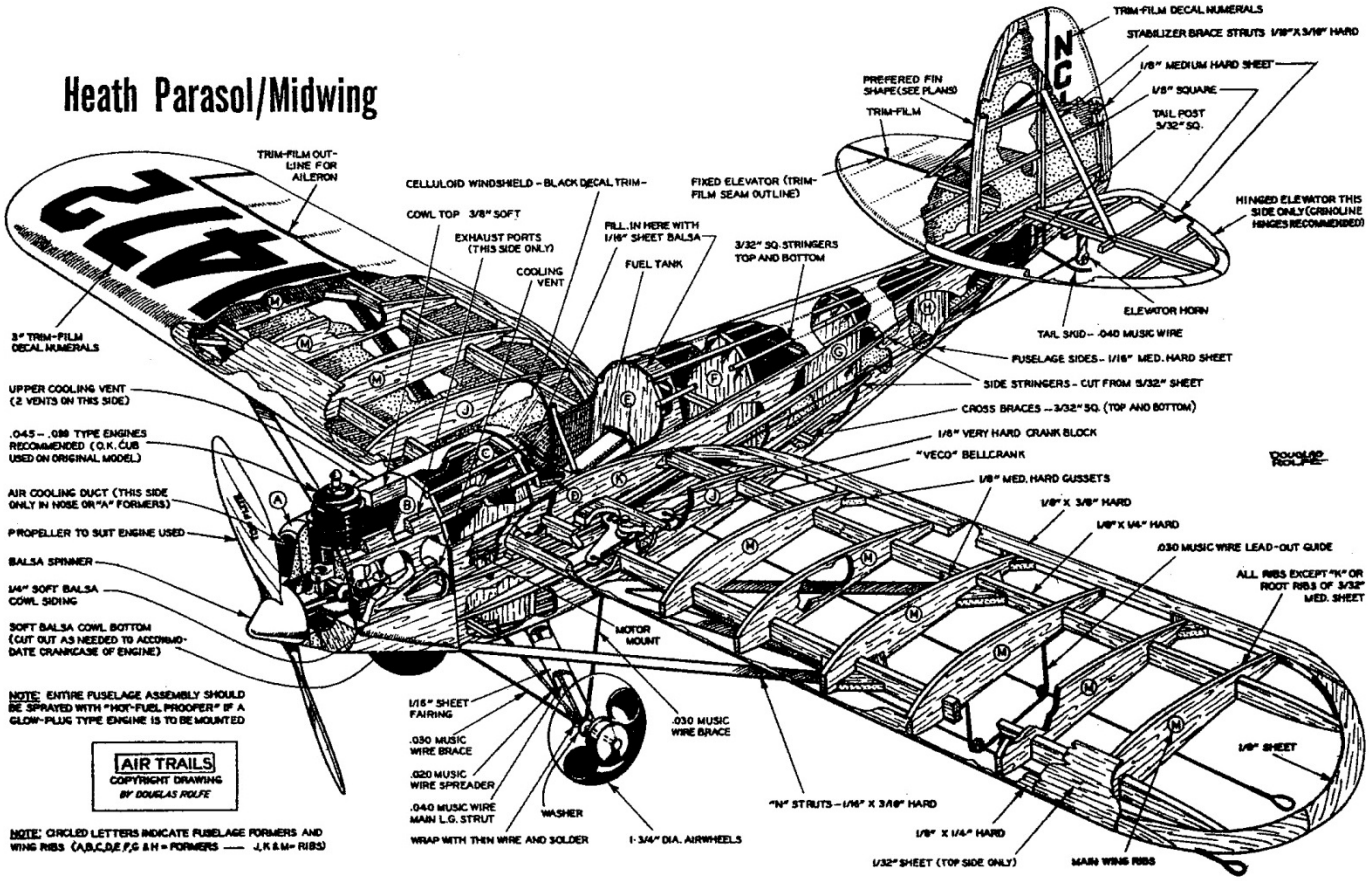

Due to the fairly long nose moment, it will.be necessary to shift the wing forward from the scale position when using a .19 or .23. As a Parasol free flighter, any engine of .020 to .070 cubic inches will do nicely.

Before construction is started, it should be remembered that flying characteristics will be affected by the grade of balsa used extra light wood (except on spars and struts) for .020 to .045 engines, medium for .045 to .070, and medium-hard for the .099 engines. Construction is simple and straightforward; however, it won't hurt to read the rest of this article.

The two fuselage sides are cut from 1/16" medium sheet and marked for former positions. Cut both sides from identical grade balsa, as any real difference in grade will warp the fuselage. Once the required formers B to H are cut out, they can be cemented in place between the fuselage sides, starting at the rear and working forward. Note that 3/32" sq. cross braces are fitted between formers to counteract the shrinkage of the covering, which would pull the sides in between formers, ruining the appearance.

Once the engine bearers are slipped into place and cemented, the stringers can be added. Since the bell crank is externally mounted on the Midwing version, holes in the formers for the pushrod are unnecessary. Nevertheless, it isn't a bad idea to install the fuel line before the top stringers forward of the cockpit are in place.

Due to the pronounced curve of the fuselage sides aft of the cockpit, it is best to cut the side stringers from 3/32" sheet instead of forcing strips to follow the curve. On the Midwing version, the position of the upper side stringers is important, as strips of 3/3 2"x 3/16" cemented to them provide the proper incidence for the wing roots (rib K). So check the alignment of these stringers carefully.

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The landing gear is bent to shape now and assembled. Note that the main and spreader struts are braced fore and aft by a brace strut on each side. The brace strut is cemented to the fuselage at its extremities and the point of the "Vee" is wrapped with fine copper wire and soldered to the joint where the main and spreader struts are joined.

Be sure to add a second and third coat of cement to all wire strut to fuselage joints before covering the fuselage, a point all the more important if the U-control version is being made. Once the engine is mounted, touch up all joints with cement, especially between the engine bearers and formers. After careful sanding, the covering may be applied. It is best to work with narrow strips running the length of the fuselage to achieve a smooth job. On the free flight Parasol job you may want to cover the wing and tail surfaces with Jap tissue, but for the fuselage it pays to use Silkspan because of its greater strength and resistance to tearing.

The tail surfaces need no explanation. Merely cut the necessary 1/8" sheet outlines and 1/8" sq. strips to size and assemble. Sand leading edges round and trailing edges to a taper and there you are all done. The rudder shown on the Midwing side view was the shape used on both the early type Parasol and on the Midwing. The larger type, as shown on the side view of the Parasol, was the last type used, about 1936- 1937.

The wing is of light construction, inasmuch as it is strut braced. If you desire you may add sheet balsa to the leading edge upper camber for rigidity, as the wing on the original model warped upwards at the tips when the covering was doped. The celluloid panel in the center section applies to both the top and bottom surfaces of the wing. Note that braces are added between the main and K ribs on the Midwing version to resist the pull of the covering these won't be necessary if leading edge sheet balsa covering is employed. The bell crank mounting is fitted flush with the bottom of the wing and the bell crank put on before the wing covering is applied.

The full-size plans will contain additional construction information.

Assembling the model should present no problem if attempted carefully. It is best to use a large fiat surface (like a drawing board or desk top) as a jig. Line up the fuselage in a horizontal position, with the landing gear struts hanging over the edge of the board. With blocks and strips of masking tape, secure it in place, once it is level when viewed from the side and front.