Shining black finish with white markings complete a really striking airplane! As originally designed in 1932 for the King's Cup, the 100-hp DH Gipsy four-in-line air-cooled engine version, had span of only 24 ft. Subject should make a practical RC scale airplane.

Deep, full cowl for inverted engine lends that racy look. Ship disassembles for travel. Wing in two pieces; even the landing gear comes off. As a matter of fact, shopping bag can hold it.

The Comper SWIFT

By HOH FANG-CHIUN

If a real plane ever existed that makes a more beautiful, better flying model than the Swift, we've yet to hear about it. For Half A engines.

In model form the chunky Swift looks far bigger than its true size. For the finishing touch a dummy pilot's head with a strip of colored silk tied around the neck should bring ship to life.

► Free flight scale probably is the most "touchy" branch of aeromodeling, for competition models of this type must be light in structure, yet having good aerodynamic character. Consequently, they usually are weaker than most other types of models and may be damaged if incautiously handled.

The Comper Swift was not designed to be a hot contest ship that will bring home many trophies but rather as a robust fly-for-fun sports model that will last for years of enjoyable week-end flying. In designing the model, therefore, attention has been concentrated on producing a durable and easy-to-transport plane.

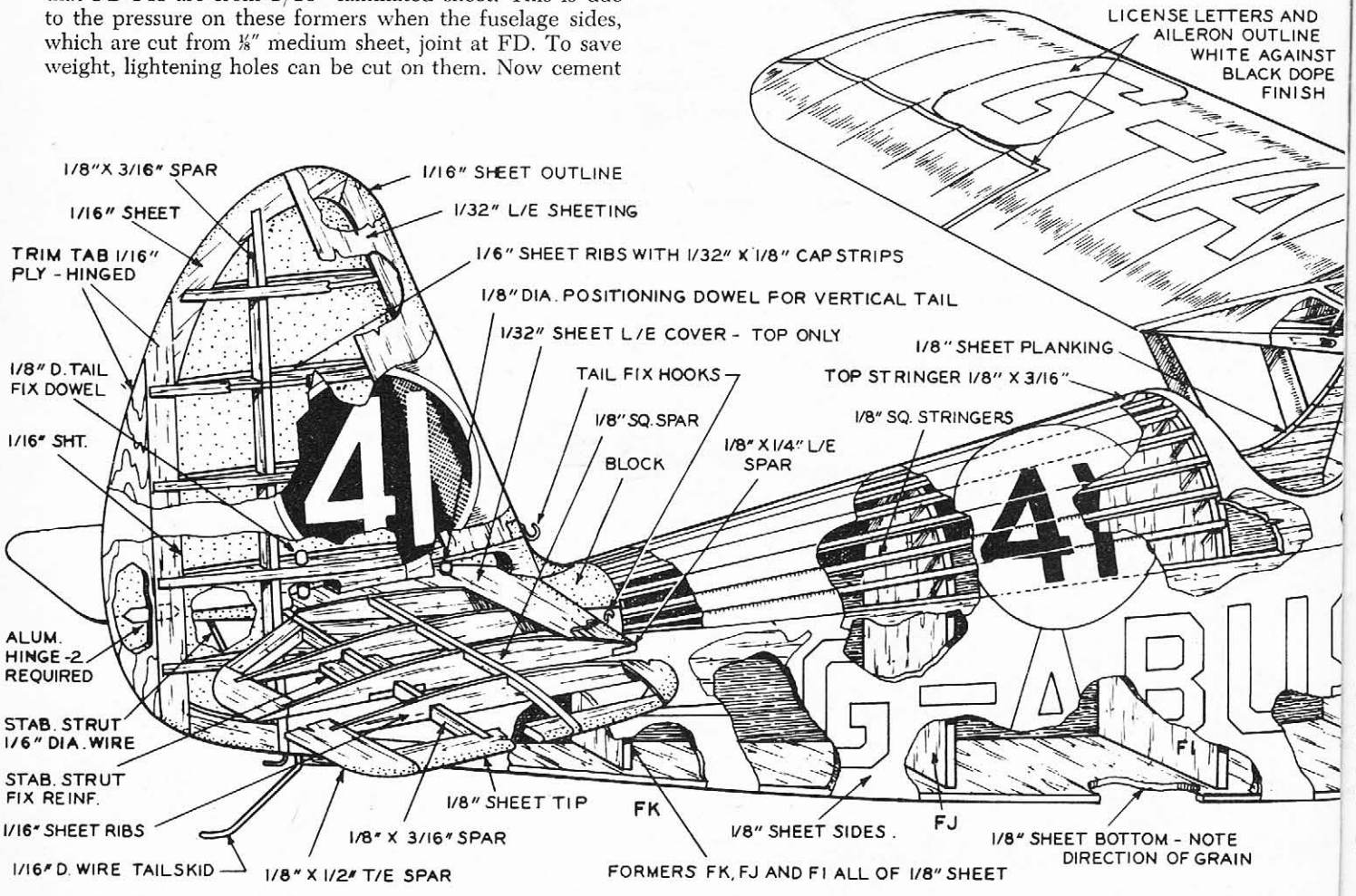
To solve the transportation problem most parts of the model are made detachable and hooks, tubing, and rubber bands are used for this purpose in the design. It is possible to put the model into an ordinary handbag, as even the

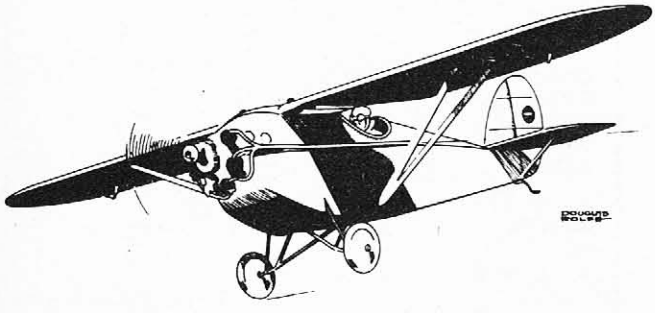
landing-gear can be detached from the fuselage. The model is accurate except for tail areas, which are slightly enlarged, and the added dihedral, which is indicated by the wing struts. These departures from scale were found necessary in order to make the model fly well with the least sacrifice of scale appearance.

An interesting feature is the shock-absorbing landing-gear. As can be seen on the plan, it is of a simple yet effective construction. It worked very well on the original model. My model had a German Taifun Hobby .06 diesel and this engine provided more than enough power, but any other engine with a capacity of .049-.075 cu. ins. displacement will do the job.

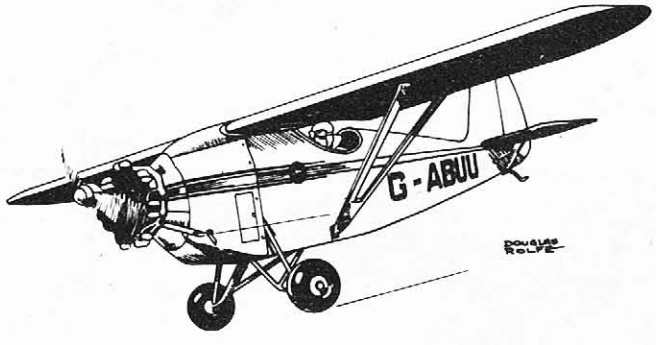
CONSTRUCTION: First, cut all the balsa formers. Note that FD-FH are from 1/16" laminated sheet. This is due to the pressure on these formers when the fuselage sides, which are cut from ⅛" medium sheet, joint at FD. To save weight, lightening holes can be cut on them. Now cement FG and FH to fuselage sides. When dry, the remaining formers can be cemented in place.

Next, cut ¼"x⅜"x4¼" engine bearers from hardwood and cement them to FD and FE with plenty of cement. Note the built-in right thrust. Before planking fuselage top with narrow strips, be sure that the 3/32" inside-diameter aluminum tubing for landing-gear is securely fitted in place at FF and reinforced with plywood gussets, etc., as shown on the plan. Plank fuselage bottom with ⅛" sheet, grain crosswise, and cement a hollowed block at FD and FE. Saw firewall FC from ⅛" plywood and cement it to F.D. The fuselage can be roughly sanded at this stage before making the wing mount. (*Continued on page* 12)



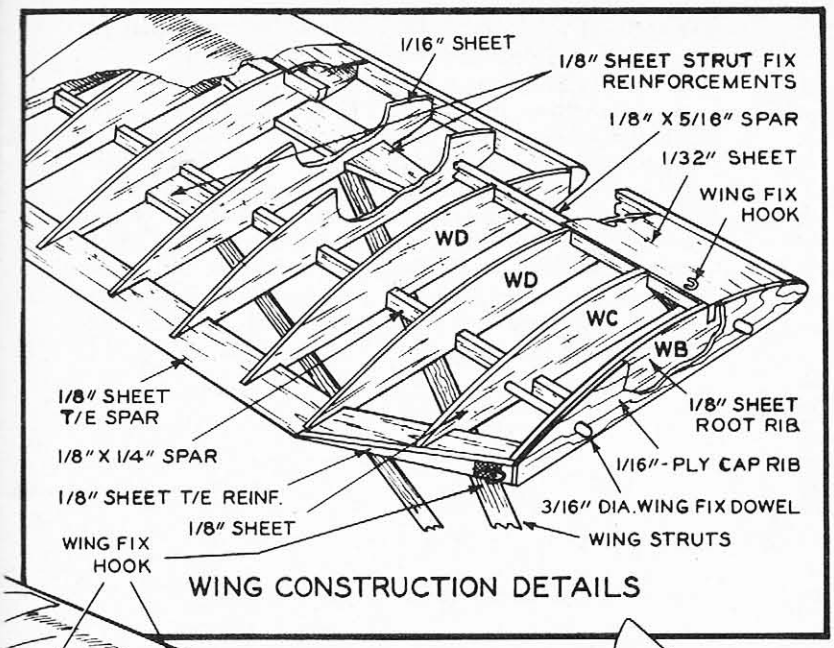


First Swift, designed by Flight Lieut. Nicholas Comper, was powered with geared-down PobJoy radial engine, had elliptical tail fin.

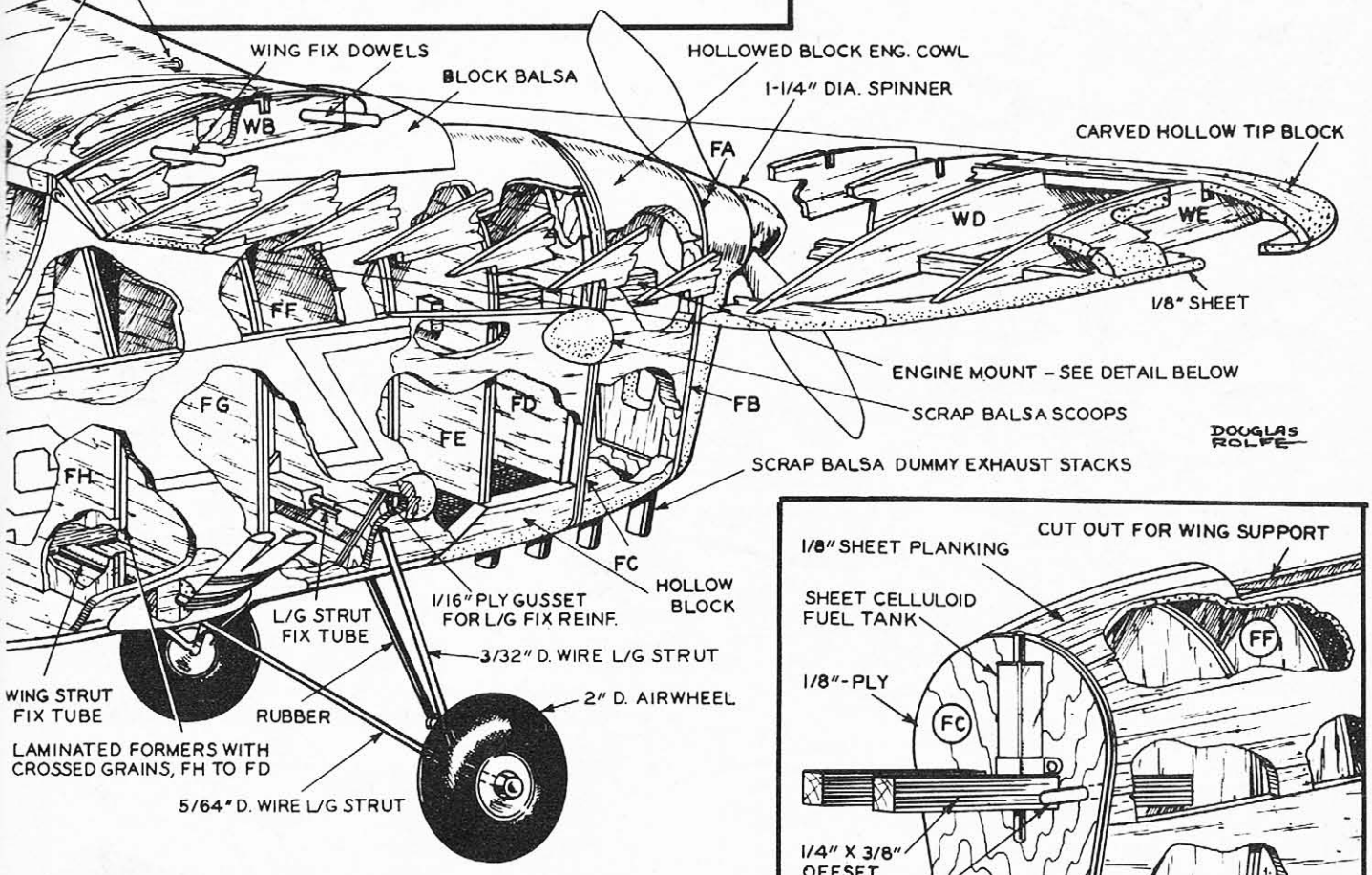


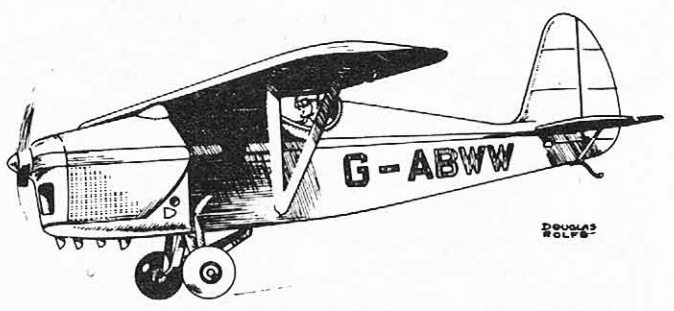
The 1932 model had low-pressure air wheels, bigger engine. In 1931 Swifts flew England to Australia, South Africa, crossed Andes.

Detail Plans and Text Continued Next Two Pages

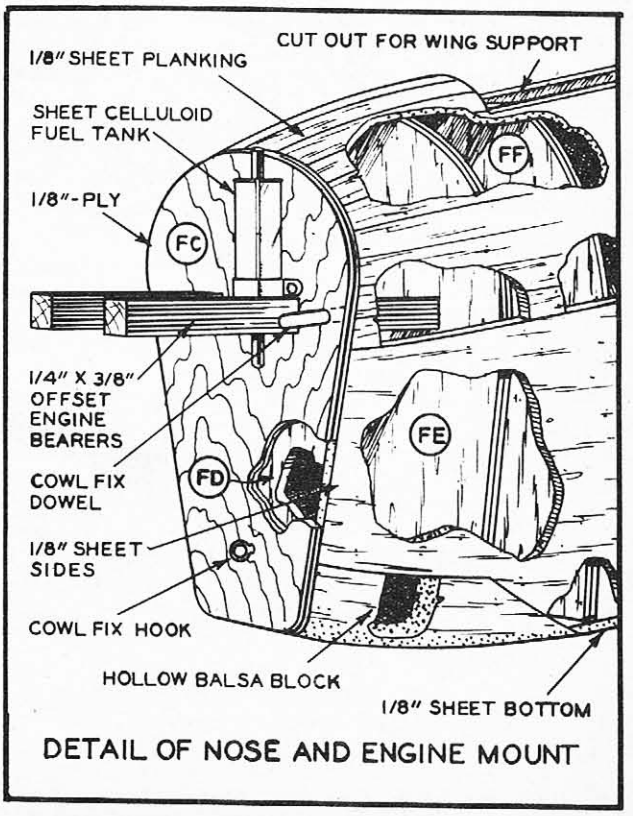


WING CONSTRUCTION DETAILS

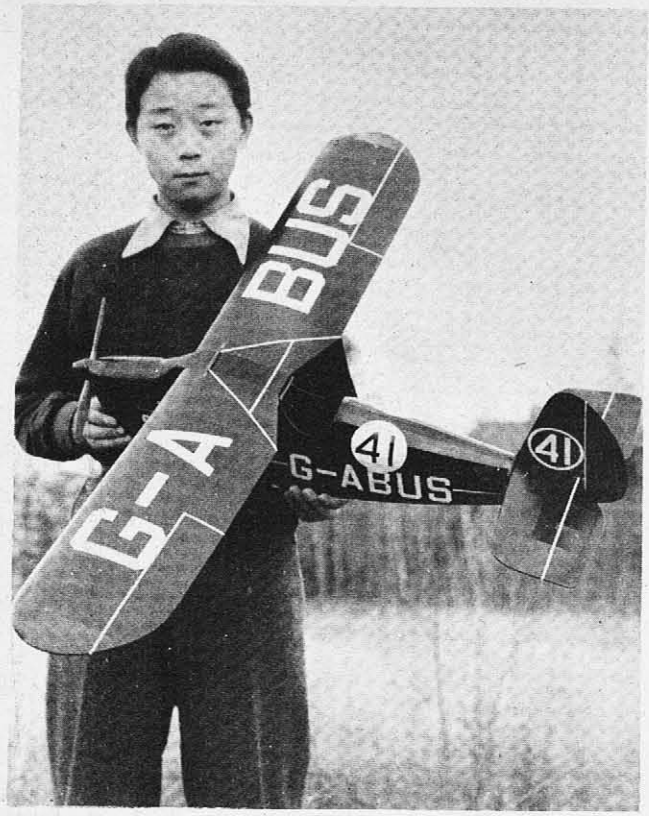




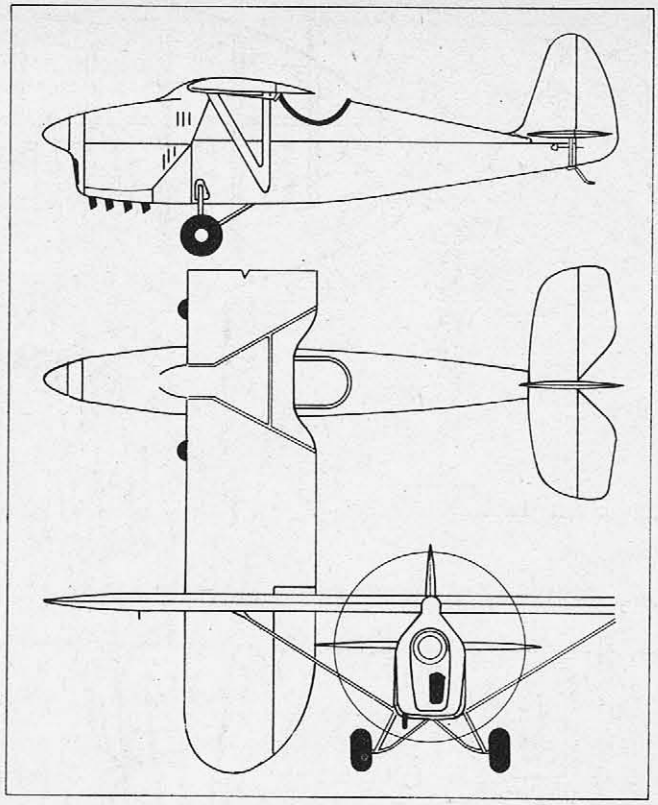
King's Cup Comper, of which two built—one for Prince of Wales, averaged about 157 mph. In 1933 Swift flew Madrid to Philippines.



DETAIL OF NOSE AND ENGINE MOUNT



Living in Kortebo, Sweden, author several years ago showed MAN pix of models as nice as the Swift, is among youngest of contributors.



Three-view supplied by Doug Rolfe illustrates the racing model as laid out 26 years ago. Swift production was begun in the year 1929.

COMPER SWIFT—Continued

The method of making the wing mount is clearly indicated on the plan by step-by-step direction, so no further remarks are necessary. The engine cowling is made of two soft blocks joined by 1/16" plywood former FB. After sanding it to follow the fuselage shape, it is suggested, in order to reduce weight, that the cowling be hollowed to the extent that the sides take about ¼" in thickness. The cowling is detachable and is held in place by a pair of rubber bands inside the cowling and to prevent movement, two small hardwood pegs, cemented to the fuselage, are inserted into it. The fuel tank can be placed inside the cowling. The 1/8" sq. and 1/8"x3/16" stringers can now be cemented on fuselage top between FI and FK. Add tailskid and cement a block on fuselage rear for stabilizer support. The fuselage is now ready for fine sanding before adding scale details.

The landing-gear is, as mentioned above, of the spring type and offers no difficulty in construction. However, to facilitate the finish of the fuselage, the landing-gear should be removed during the finishing process. The tail surfaces can be made next.

Start with the stabilizer. Pin down leading edge, bottom spar, tips and trailing edges directly on the plan. Add all ribs, which are cut from 1/16" sheet. Be sure that SA is cut 1/32" undersize at each side. Next, add all gussets, top spar, leading edge sheeting and center top sheeting before removing from the building board. Complete center section by covering the bottom with 1/32" hard sheet. Two ⅜" long 1/16" i.d. aluminum tubings are cemented and bound to underside of bottom spar between SB and SC as shown on the plan.

Pin down fin outline from 1/16" hard sheet on the plan. When it is thoroughly dry, it should be carefully removed from the building board and the remaining work is completed "in air". First cement the spar in place and then add all 1/16" sheet ribs. When this is done, add leading edge sheeting and cap strips of 1/32" sheet. The trim-tab is cut from 1/16" plywood and fixed in place with soft aluminum hinges. A soft block is now cemented in place as the plan shows and shaped to fit with the stabilizer. Two 1⅜"x⅛" diameter hardwood dowels are inserted through the stabilizer into the fin and cemented securely in the fin block. The tails are now ready to fit to the fuselage. By adding hooks, tubings, etc. to the tails, they are ready for covering and finishing.

The wings have conventional construction. Begin by pinning down leading edge, rear spar, ⅛" sheet tips and trailing edge on the plan. Add all ribs, top spar and 1/32" leading edge sheeting. When they are dry, remove them from the plan and add plywood rib, hardwood dowels, wing strut tubings, etc. The wing struts should be made of spruce or similar hardwood and shaped to a streamlined section. They are shown true size on the plan and give the correct model dihedral. The upper ends of the struts slide into aluminum tubing fittings, which are cemented on the underside of the wing as shown on the plan. The bottom of each strut has a small hook inserted into a flattened aluminum tubing, which is extended through the fuselage, and is held in place by a rubber.

The structure of the model is strong enough for any covering material. The original model was covered with silk, but Silkspan or Japanese tissue can also be used. It is suggested to fill in grain on balsa surfaces with a couple of coats of sanding sealer (wood filler) and sanded between each coat before covering. After covering, the model was given four coats of clear dope and two coats of black dope, the last coat being sprayed. The trims, registering letters and control surface outlines were masked off by transparent tape and hand-painted with one thick coat of white dope. Since the original model was powered by a diesel, nitrate dope was used exclusively.

If a glowplug engine is to be used, then use hot fuel-proof dope (Butyrate dope). Before attempting any hand-launched test glides on tall grass or similar soft surface, be sure there is no warp in the model and the center of gravity is located as shown on the plan.