

"SUPER CONDOR"

▶With the possible exception of Jetco's line of Thermic Gliders no other glider has done more to get modelers started in the fine art of soaring, than Cleveland's Condor kit.

When this kit was first released back in the 1940 era it's fantastically low price coupled with a six foot span and graceful appearance made it an outstanding favorite with modelers the world over. Even through the years since, it remained a steady favorite despite small periodic increases to offset rising costs. However, since last year this gem of modeling design has ceased to become available.

Reflecting upon this, we thought it a fine idea to do a new and similar design not unlike the original, but with refinements in structure, plan outlines, dihedral and optional radio installation. As we had fully expected, the new design, proved to be every bit as able as the original for thermal soaring. With the addition of the .020 power-pod and radio gear, the art of soaring reached new heights for us, and like many others we're slowly becoming addicted to it.

For those who might aspire to use an .049 engine, be advised that it is really not necessary, but if you do so, may we suggest planking the fuselage and maybe adding some leading edge planking to the wing. As for radio gear, we used America's Hobby Center Astro "33" single channel unit which is a little large, particularly since it uses a 9V power supply. However, the range is excellent and the model's soaring capabilities didn't suffer from the slightly higher weight.

A good flight will last between 10 to 15 minutes, and if you should hit strong rising currents, you can keep the model in the air for a considerably longer time. Sound's good, doesn't it? Why not get started building it, either for straight towline soaring or for Radio Control Soaring, with or without power assist. Hillside launching offers still further possibilities. America's Hobby Center plans to make a kit available of this model. This should appeal particularly to modelers with limited time, or those lacking experience in enlarging plans.

FUSELAGE CONSTRUCTION: We would recommend starting with the fuselage assembly, which utilizes the half shell technique. This makes it possible to maintain a highly streamlined shape of maximum strength and lightness. Cut all the required keel pieces and fuselage formers from hard $\frac{1}{16}$ " sheet. Pin down all the required keel pieces over the full size plan layout. Then cement all the formers for one half the fuselage in place, as shown in the assembly sketch. Cement in the main side stringer which is a hard $\frac{1}{16}$ "x $\frac{1}{8}$ " strip. When dry, add most of the other $\frac{1}{16}$ " sq. stringers while the half shell is still on the board. This will prevent the fuselage from warping while it is being assembled.

When completed, remove the half shell from the plan, trim the excess cement and then cement the remaining half formers to the other side.



Allow ample time for drying, then adhere stringers in place on the opposite side. As this nears completion, add remaining fuselage detail such as nose block, stab platform, wire tow hooks or optional wheel. If your planning a radio installation, install or make provision for equipment to be used at this time.

WING AND STAB CONSTRUCTION: The wing is made in four separate panels to accommodate the gull wing arrangement. If your a little squeamish about using a gull wing, an optional polyhedral arrangement is also shown. A double rib at each break simplifies the wing assembly and strengthens the joints. The addition of dihedral gussets makes a further contribution.

Start construction by pinning down the leading and trailing edges for one of the wing panels. Then position all the required ribs in place and be certain to angle the ribs as shown at each dihedral joint. Cement all the top wing spars in the required notches and when dry remove them from the plan. Next cement all bottom wing spars in the rib notches. When all four wing panels are complete, join them together at the proper dihedral angle as shown in the sketch.

The stabilizer and fin construction is similar with a few exceptions. First, in the case of the stabilizer, it is constructed in one piece and since the ribs have a flat bottom, the bottom spars can be pinned down in place at the same time the leading and trailing edges are. As for the Fin and Rudder, it is a flat built-up surface utilizing $\frac{1}{16}$ "x $\frac{1}{8}$ " bracing for ribs. For R/C it is made entirely of $\frac{3}{32}$ " medium sheet balsa.

POWER POD: The power pod is constructed entirely of sheet balsa. Begin by cutting the pylon base from soft to medium $\frac{3}{32}$ " sheet and prebend it to the approximate wing curvature. Then tack it to the wing frame joining the two halves together at the correct angle and cement securely.

Cut the pylon mount from $\frac{3}{16}$ " hard sheet and cement securely to the base.

Generous cement fillets or some fiberglassing are recommended here. The nacelle sides are made of $\frac{3}{16}$ " medium or soft balsa. If you prefer to use the full width of the firewall, use a thicker piece and hollow for lightness. Cement the $\frac{1}{8}$ " plywood firewall in position and sand the completed unit to the desired cross-section.

COVERING AND FINISH: Because of the fuselage's streamlined shape it is necessary to cover it in strips, being careful not to cover too wide an area as wrinkles will form over compound curved areas. Applying Silkspan dampened with water will help to minimize the tendency to wrinkle.

The wing and tail surfaces are covered, one flat panel at a time. We used red Silkspan for the fuselage and rudder, and yellow for the wing and tail surfaces. When completed, apply three or four coats of thinned clear dope, smooth-sanding between each application. For added trim on the surfaces we used some red and white trim tapes (Timely Plans) and also added the name to the wing.

FLYING: If your flying the model as a straight towline glider, add some lead ballast in the nose and keep some clay handy for trim adjustments.

Make your first towline flights with a short line of about 25' and let it out about ten feet at a time. Tighten up the turn if it appears too shallow. If the nose tends to drop to steeply in the glide, remove some of the trimming weight. Flying with the R/C installation eliminates virtually all balance problems with the possible exception of slight trim adjustments which can be compensated for during testing.

We used a removable power-pod because we wanted to test the model with and without power. However, for serious flying, having the power-pod permanently affixed to the wing is strongly recommended, for otherwise you might encounter slight changes in trim adjustment periodically.

Testing can be done with the engine running near peak, as the design does not climb rapidly. However, limit engine run until final adjustments are made. Hope you enjoy the thrills of soaring.

BILL OF MATERIALS

(Balsa unless otherwise specified)

- 3— $\frac{1}{16}$ " x 3" x 36" (hard) Wing and stab ribs, fuselage formers and keel pieces
- 2— $\frac{1}{8}$ " x $\frac{1}{16}$ " x 36" (hard) Tapered wing trailing edge
- 1— $\frac{3}{32}$ " x $\frac{1}{4}$ " x 24" (hard) Stab trailing edge
- 1— $\frac{1}{16}$ " x $\frac{3}{16}$ " x 24" (med. hard) Stab leading edge
- 2— $\frac{1}{8}$ " x $\frac{1}{4}$ " x 36" (hard) Wing leading edge
- 1— $\frac{1}{8}$ " x $\frac{1}{4}$ " x 18" (hard) Fin leading and trailing edge
- 12— $\frac{1}{16}$ " x $\frac{1}{8}$ " x 36" (hard) Wing and stab spars, fuselage side stringers and braces
- 20— $\frac{1}{16}$ " x $\frac{1}{16}$ " x 36" (hard) Fuselage stringers and braces

Light weight Silkspan covering; fuel-proof cement and clear dope; $\frac{1}{8}$ " diam. wing dowel; 1 $\frac{1}{2}$ " diam. wheel (optional); celluloid windshield; $\frac{3}{16}$ " hard sheet pylon mount; $\frac{3}{16}$ " soft sheet nacelle sides; $\frac{1}{8}$ " plywood firewall; $\frac{3}{32}$ " sheet pylon mount base; $\frac{3}{32}$ " sheet fin and rudder; .040" diam. wire; Radio equipment; .020 to .049" engine Trim Tapes (Timely Plans); decal numbers ●