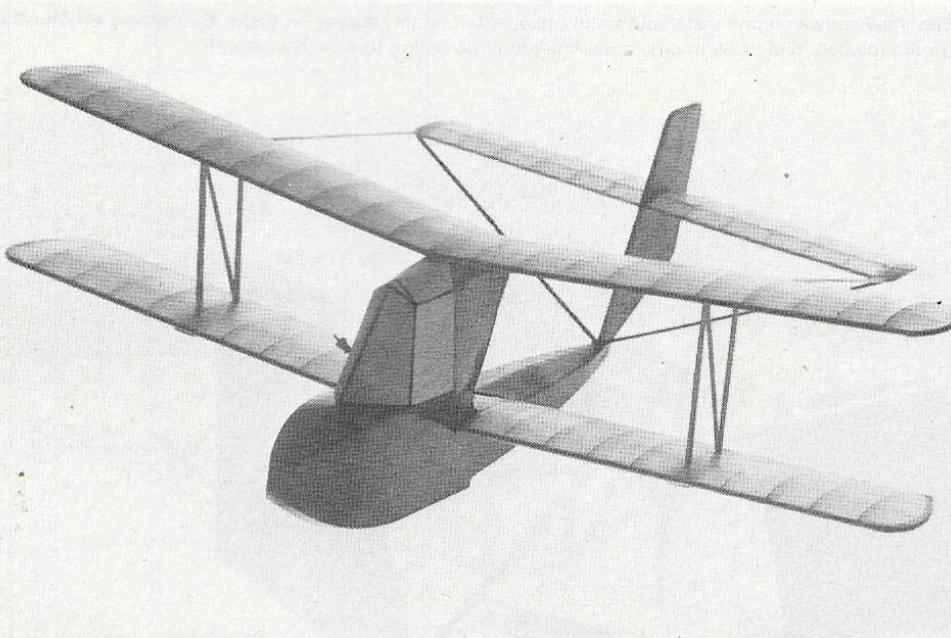


PHOTOGRAPHY: JOHN R. WALKER

Sheldt Gull

by John R. Walker

A seldom seen pusher-flying boat design
for use with CO₂ power.



Sheldt Gull has many unusual features for a CO₂ free flight model (top). Note hull bottom and wedge shaped sponsors on under side of wing. Gull also sports a delicate tail assembly (bottom).

The Scheldemeeuw (Scheldt Gull) was a light single place pusher flying boat, built by Koninklijke Maatschappij of Vlissingen in the Netherlands. The plane had a single-step flat-sided hull and was constructed of spruce and plywood. The hull was plywood covered.

Built in the mid-1930's (an all metal version of the Gull was constructed but WWII caused the developmental program to come to a halt) the Gull had a span of 22 feet (6.7 m), a length of 17.3 feet (5.3 m) and a height of 8.16 feet (2.3 m). Maximum speed was 78 mph (125 kmh) and a cruising speed of 65 mph (105 kmh). Range was 1900 miles (300 km). A 40 hp Parga two cylinder opposed aircooled engine supplied the power.

No three-views could be found. Our model was developed from photographs and information supplied in *Jane's All The World's Aircraft 1939*.

Since the original Gull had a twin cylinder opposed aircooled engine, the Brown CO₂ Twin seemed to be an ideal selection for our model. We were quite pleased with the flight characteristics. Only three test flights were necessary to trim out our model. The model flew at a slow, steady speed and climbed until the CO₂ charge started to run out.

The dry, hot weather precluded ROW flight testing.

Construction

The model is not difficult to build. It must, however, be built light. Use care in selecting the balsa. Use the lightest wood you can find.

If $\frac{1}{20}$ " sheet is not available, sand $\frac{1}{16}$ " sheet to that thickness. We made ours by placing $\frac{1}{16}$ " sheet between two lengths of .040 music wire that we had "hot Stuffed" to a smooth, flat board. We sanded until our sanding block contacted the wires.

Additional weight can be removed by cutting lightning holes in the ribs and formers.

The first step is to construct the fuselage. Cut out all formers, the backbone and keel.

Sheldt Gull

Mark former locations on the keel and backbone. Cement the formers to the keel and backbone. Be sure they are square and straight. Cyanoacrylate adhesives are used for almost all of the construction.

After the hull skeleton has been assembled and you are sure that it is true, cement the hull sides and bottom pieces in place. Notch the side panels to receive the lower wing. Complete the front section of the hull.

The CO₂ tanks (we used two) can be mounted in bulkheads as shown on the plan or held in place with light plastic foam. Formers 5 and 5B can be cemented into place and the predrilled 1/16 ply motor mount can be epoxied into place.

The wings are identical in plan form but are slightly different when viewed from the front. The dihedral break is in the center on the *Top Wing* while the lower wing has a flat center section the width of the fuselage.

The wings are made in the usual manner. Since all ribs are identical, a great deal of time can be saved if a 1/32 ply rib template is used.

Cover the center section of the lower wing with balsa as shown on the plan. Remove all "fuzzies" from the wings by sanding. Mount the lower wing to the hull.

Mount the engine. Cover it with tape until construction is completed.

Assemble the tail surfaces and sand them to the required shape. After covering they can be attached to the hull. Be sure they are properly aligned. Cover the top rear of the hull.

The wings and tail surfaces are covered with a good grade of tissue. This tissue is available from many sources so there is no excuse to use any of the stuff that is passing as covering material. The hull is covered with a contrasting color tissue (preferred) or color doped (adds a lot of weight).

Mount the top wing to the hull. Fabricate the interplane struts and cement into place.

Align the tail surfaces with the hull and wing if necessary and cement the 3/32 diameter aluminum tubing braces and other tail

braces into place.

Water shrink the tissue covering and apply two or three thin coats of clear dope.

Attach the wing tip floats. Trim the model with colored striping tape or with strips of "sticky" Monocote.

Flying

For the first flight, wait for a calm evening. Test glide over tall grass adding clay or solder strips until you get a good glide.

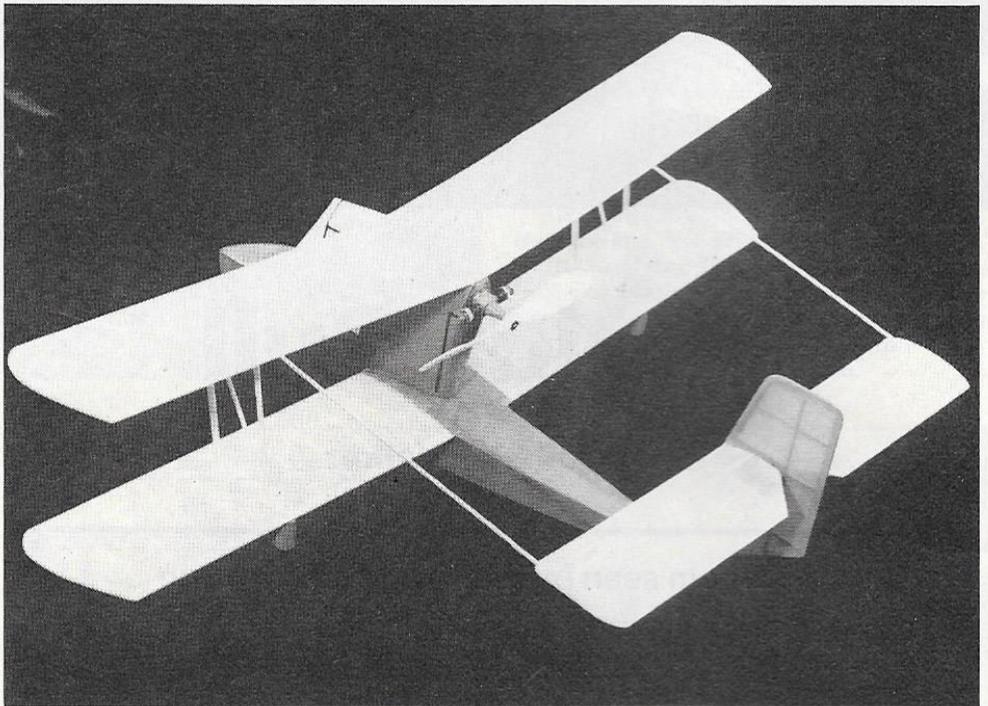
Charge the tanks. As this is the first flight, hold the charger in an upright position so only gas, no liquid CO₂, goes into the tanks.

Flip the prop *To Rotate Clockwise* - it's a pusher, remember . . . and launch. Evaluate

the flight and shim the engine to make power adjustments.

My first successful flight was straight as an arrow . . . right to the only tree in the area. A thin aluminum tab (cut from an old litho plate) was added to the rudder and bent slightly to give a circling flight. It didn't seem to make much difference whether the model circled to the right or to the left.

When power flight with light charges are the way you want it, give the tanks a full charge and enjoy yourself. . . . but don't forget to put your name and address on the model. Bill Brown's little "gem" will be a collector's item in coming years and you don't want to lose it. 



Top view shows engine installation and unusual tail struts (**above**). In flight, Gull shows off unusual profile (**below**). Little CO₂ engine does fine job of powering this pusher aircraft.

