

CORBEN SUPER ACE

One scale model that is a relaxing, stable, and realistic flyer. Designed for REM controls, it is simple to build. Power is a McCoy .35 RC.

by BUD ATKINSON

Those of you who have lived in the so-called Golden Age of Aviation, the late 20's and 30's, do you remember 1934? That was quite a few years, and also a few model airplanes, back! That was the year the great depression really began to be felt—the year of the Century of Progress, or World's Fair, in Chicago; the year that a screaming maniac was telling the rest of the world of the so-called master race.

The great airplane of all times, the DC-3 was still only on the drawing board, even the simple little J-3 was not yet airborne. The Model T and Model A Fords were commonplace. Maxwell Bassett came to the Philadelphia Nats., with of all things, a miniature gasoline engine in a 4-ft. span airplane. And in that year a young man named O.G. Corben was designing and building airplanes in Wisconsin—a small home-built type design—and in those days they were *really* home-built.

You didn't run down to your local airport and buy anything you needed to build a flying machine. Even the engine had to be handmade, as there were no



The real Super Ace was one of the finest, and the first high performance home-built plane, developed during the "Golden Age of Aviation."

light and small engines as today, and if there had been, most home builders didn't have the green in 1934! Corben's mainstay was three small airplanes of about 25-ft. wing span. One was the Corben Jr. Ace. It was a cabin job resembling the later Porterfield or Rearwin Sportster of the late 30's and early 40's. The next was the Corben Baby Ace, which was destined to become one of the all-time favorites with the home builders, and no doubt more are being

built today than before WWII. This little ship used a variety of engines, mostly imports. The third airplane was a beautiful little bird with racy looking lines, the romance of the open cockpit. Resembling a fighter plane of the day, it was the Corben Super Ace, powered by, of all things, an automobile engine, and a Model A Ford engine at that.

The Baby Ace and the Super Ace both used the same wing and stabilizer layout, as

The cowl in the full-size Ace enclosed a Ford Model A engine, completely encloses the McCoy in Bud's model.



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Corben Super Ace

well as the landing gear, but the fuselage were entirely different. With the coming of the model airplane engine in the late 30's, the modelers fell in love with the Super Ace. Many of the old model kit manufacturers had models of the Super Ace, from 10-cent dime store rubber models (which the author cut his teeth on) to the big six-ft. gas free-flight models.

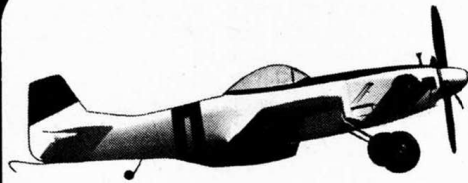
The magazines of the 30's also had plans on the Super Ace. It is ironic how the models of the Super Ace were so successful and well accepted, but the full-scale Super Ace did not enjoy the same success. A Super Ace ready to fly could be had for as little as \$895 delivered, but in those days \$895 was a lot of money. You could also buy the Super Ace in kit form for around \$500 to \$600—still a lot of money. Building an airplane was much more difficult in those days, as almost everything had to be improvised or handmade.

The next stumbling block was the water-cooled engine, a converted Model A Ford engine. Corben replaced the pan with an aluminum one, a new front crankshaft bearing to hold the shaft extension for the prop; also, an aluminum head to cut down weight. You could purchase a rebuilt Model A engine for \$395. The A engine developed about 55-hp. It also developed vibration and, at times, had heat problems, as it did in other home-builts of the early 30's. The Super Ace had performance, but was soon to be forgotten as the Piper Cubs, Taylorcrafts, Porterfields and Aeronca's were to be mass produced with the coming of better air-cooled engines.

In the model world, the Corben Super Ace is still one of the all-time greats of the "Golden Age of Aviation." So this is a tribute to Mr. O.G. Corben and his contribution to private pleasure flying.

Construction: The construction of the Super Ace is simple and uses common scale-model practice. I made a fiberglass cowling, but it is large enough to build of balsa wood, if preferred. However, a glass cowling has many advantages and is comparatively easy to build. The McCoy .35 is more than enough power and fits the Super Ace cowling very well. I believe, if you keep your Ace light, even a good .19 would fly it O.K. My Super Ace weighed 4¼ lbs. ready to fly, using the Kraft KP-4.

The landing gear struts are of ¼" dowel and should be epoxied in the upper part of fuse. The knee of the struts should be of flexible material so as to give when the landing gear flexes on hard landings. I used a small length of rubber tubing; the lower strut attached to main gear by means of drilling a hole in a metal tab, then slipped over axle before wheel is installed. The tab is epoxied to ¼" dowel strut. The Super Ace had a tailskid—no wheel. I epoxied a 1/16" wire skid to rudder and used stitching on lower part of rudder. The Ace steers very well considering it uses a wire skid; also I have had very little trouble with the Ace tracking on takeoff. I was rather surprised at how well it did track considering the landing wheels are fairly close together. The take-offs and landings are beautiful to behold!



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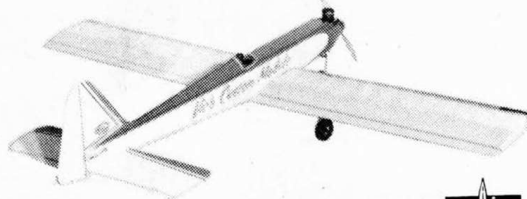
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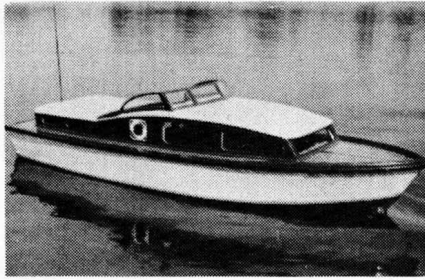
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SPORTSMAN 44

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Detail has been kept to a minimum, the only fitting being a steering wheel. We have found that whatever fittings were installed were eventually lost during operating the model at high speed.

Kit features a one-piece molded fiberglass hull. All parts are pre-cut (no: die crushed). Deck planking is mahogany and prima vera strips. Deck frames and all runners are hard wood. Cabin sides are 1/8" luan plywood. Mahogany deck bow trim, plywood cabin roof, plexiglass for all windows. All parts needed to complete the kit. Plans are full size and include step by step construction instructions.

SPORTSMAN KIT: \$75.00

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The wing is standard construction. The block that holds the dowel keys at the leading edge should be hard wood and epoxied in the wing. I use a nylon bolt for wing hold-on, but of course you may use your own method for holding the wing in place. The wing struts are of spruce wood and are explained on the plans. Don't forget blind-nuts in wings for struts—there are four.

The entire tail is made of 1/4" balsa sheet. The Super Ace has a large rudder and don't be surprised at how effective it is. The outer hole on a Bonner horn is about right for the first flights, with propo the turns are smooth and you can't tell them from aileron turns. About the only change from scale, other than construction, of course, is the enlargement of the stab. The Super Ace had a very small stabilizer, as did many of the low-power airplanes of its day, so I enlarged the stab somewhat; since we are only using rudder for turning, it seems to be about right. Both outlines are shown on plans.

The brochure I have from Corben states the wing and stabilizer and elevator were all silver; the fuselage, rudder and fin and all struts were yellow, with the entire cowling, upper deck to cockpit head rest all black. Lettering was black on wing and tail. The name "O.G. Corben" on lower cockpit was white as was the name "Super Ace," on both sides of cowling. I would assume this is the color scheme of all the factory ready-to-fly planes.

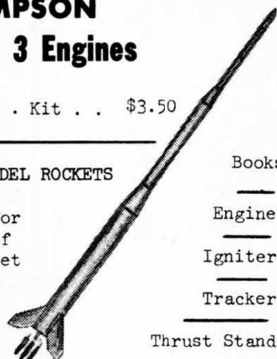
I am sure if you are old enough to remember the Corben Super Ace of the 30's you will be eager to build this superb flying RC scale model. If you are not old enough to remember it, get old dad to tell you about the Corben Super Ace or all the airplanes of the "Golden Age" of aviation, and let's build more scale.

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