

CONSTRUCTION

BABY ACE D



A scale model that is a pure delight to build and fly.

THE BABY ACE, by O.G. "Ace" Corbin, was originally developed in Topeka, Kansas, in 1929. Closely following the design parameters of the Heath parasol, the Baby Ace was intended to fill a market segment for a single-seat sport aircraft. Production was moved to Wichita, Kansas, in 1930 and a cabin version was developed. Sales were slow and Corbin subsequently moved his operation to Madison, Wisconsin.

Only six were actually built, with others available in kit form. Note this early

version differs markedly from our model, most notably in the shape of the empennage and wing tips. The reason for this is that in 1953 Paul Poberezny acquired the rights to the Corbins and, with former WACO engineer Stan Dzik, redesigned the old Ace into the model C. This redesign was published in "how to" form in *Mechanics Illustrated* in 1956 and really put home-building and the Experimental Aircraft Association (EAA) in motion.

by D.B. MATHEWS

When the demand for plans and kits exceeded the time available to the EAA, the rights were sold to Cliff DuCharme of West Bend, Wisconsin. His Ace Manufacturing company again redesigned the Ace into the D model and made kits available. An old brochure loaned me by Collectaire Photo* contains such gems as "You can start building this aircraft for as little as \$58.15. Beginning with the wing rib and aileron kit the builder progresses with the wing assembly materials, etc...all component parts prefabricated...absolutely no welding, bending, or machining required."

Many Baby Ace D model have been built both from the kits and from the plans, which are now sold by Ace Aircraft in Ashville, North Carolina. They are common sights at most fly-ins and modifications in fin shape and coloration run rampant. Anyone interested in variations should contact Collectaire for a photo package that even includes one on floats!

The specifications of the Model D are: 26½-foot wingspan, a length of 17 feet 8 inches, an empty weight of 575 pounds,



Realistic on the ground and in the air. The model is hard to tell from the real thing.



Another home-built Baby Ace version, in cream and red. Collect-air photo.



A painted Baby Ace in white trimmed in red. Collect-air photo.

medium horns, particularly for the tail wheel tiller. The wire joiner for the two elevator halves is much easier to epoxy if the units are built jointly and not separated until the wire is installed.

Presumably it's a little unusual to suggest a scratch-builder purchase a ready-cut and numbered wing kit. However, if you're put off about cutting ribs and such, I designed the Baby Ace D around Sig's RP-BK-203 wing kit. It's current price is \$18.50 and if you order it, I'd suggest also ordering construction booklet IB-203.

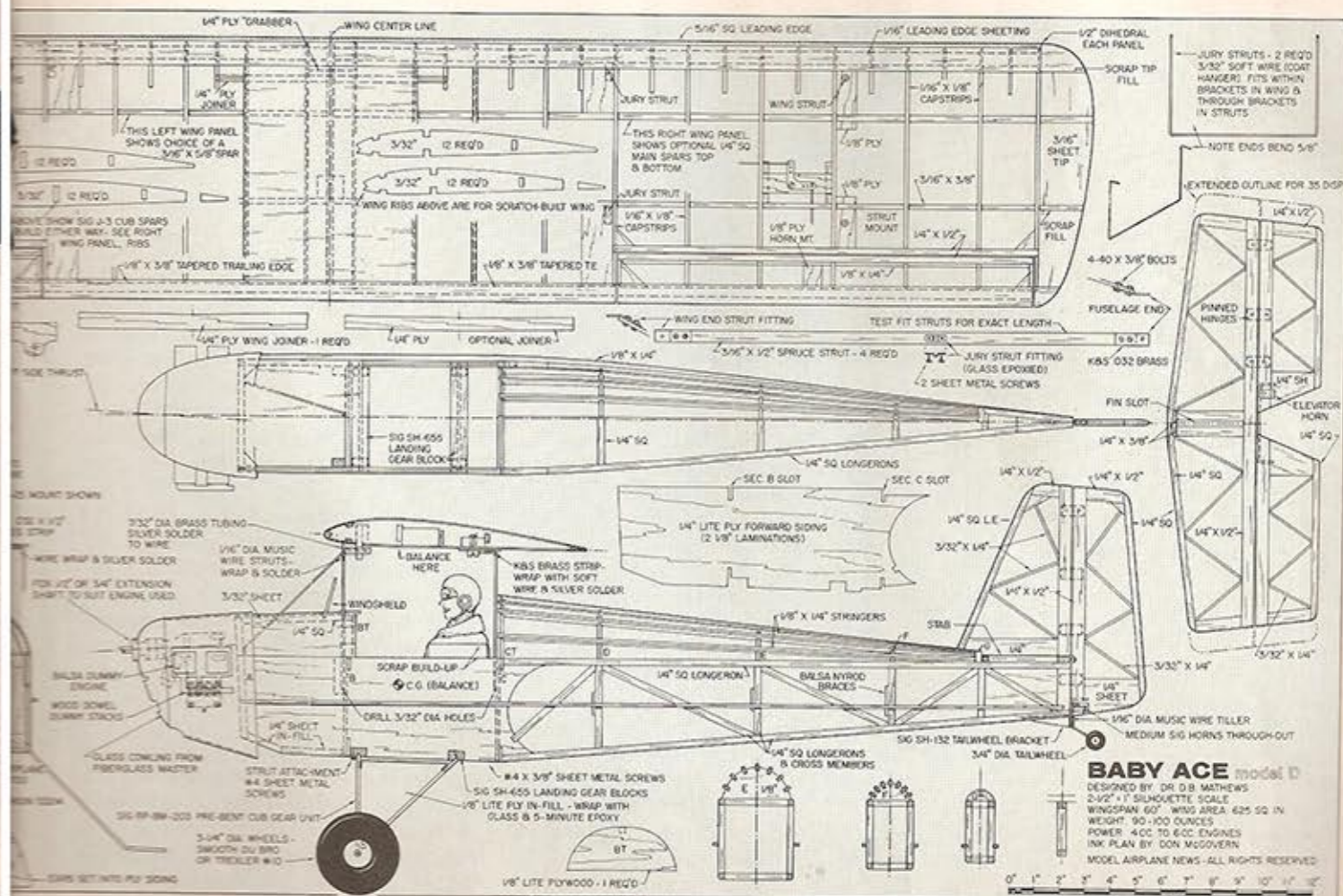
All that is required to complete the wing is a new ¼-inch ply joiner, two ply center ribs, and new mounting plates for the struts. For the pure scratch-builder, I've shown an alternative wing rib with the spars on the outside. In all other respects the wings build the same.

Ailerons are built integrally, then cut out and hinged. Don't epoxy the center section block for the nylon bolt and the "grabber" until the wing is jiggled as per the photo. The grabber provides adjustment in the left-right plane, as well as the

incidence. This is done while the bolt is in place. Tip leveling is accomplished with the final positioning of the wing strut screws. The photo is a rather confusing one, but study it for the alignment step. Use slow-set epoxy, clamps, and lots of patience for this. Add the center section sheet next.

I used a simple wire bend to actuate the aileron pushrods off of the servo arm. Wrap this thing around the two wires and adjust for centering before soldering! Du-

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BABY ACE model D
 DESIGNED BY DR. D.B. MATHEWS
 2-1/2" x 1" SILHOUETTE SCALE
 WINGSPAN 60" WING AREA 625 SQ IN
 WEIGHT 90-100 OUNCES
 POWER 4CC TO 6CC ENGINES
 INK PLAN BY DON MCGOVERN
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