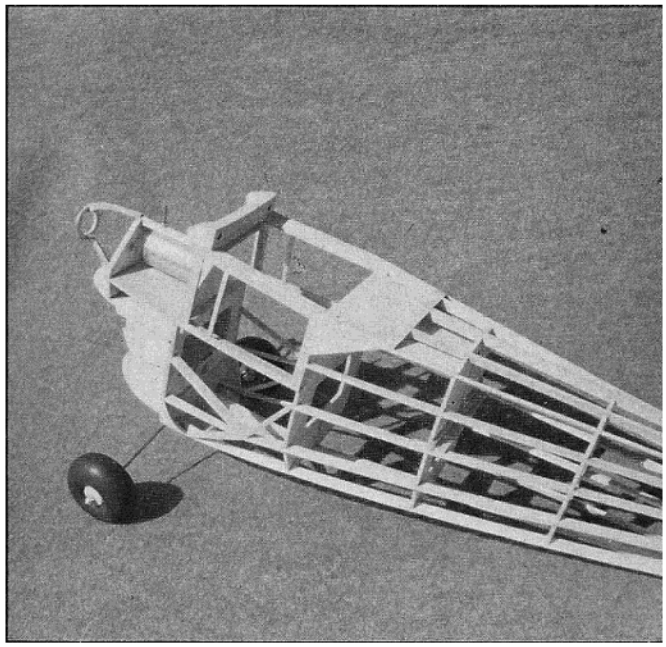
AERONCA C3

A 72" span model of one of yesteryear's great lightplanes, the 1935 Aeronca Master.

A magnificent classic from the Golden Age of Aviation, the 1935 Aeronca C3 Master is the last version of what was probably the first true ultra-light plane commercially produced in the United States. The "Airknocker" was actually not much more than a powered glider with its high aspect ratio wing and two cylinder, 36 horsepower engine - - - - -

By George W. Noreen

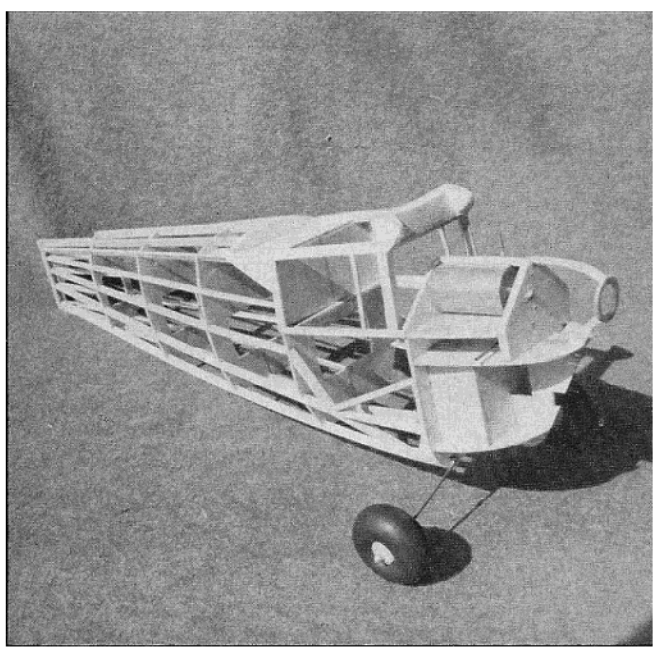


● Would you like a scale model that can be flown on any number of control channels from one on up? Then try this interesting classic from the Golden Age of aviation, the last version of what was probably the first true ultra-light plane commercially produced in the United States. The "flying bathtub" or "Airknocker" was actually not much more than a powered glider with its high aspect ratio wing and 2 cylinder engine of 36 horsepower, but it held more certified performance records for light planes than any other aircraft in its class.

The model always evokes great interest because of its somewhat comical proportions, and even the "hot-rock" pilots, who don't like aircraft they cannot fly like jets, admit that it is an interesting design, and are always eager to see it fly.

Construction is not especially difficult, but as the old saying goes, "it is not really for beginners!" A sincere effort was made to incorporate all necessary building instructions on the plan so these will be very brief construction notes. The time saved by not having to read many pages of building notes can be better spent cutting out parts.

The fuselage is put together in a somewhat unorthodox manner, with the rear section assembled first, and the nose and cabin built onto it. The plan shows this clearly, but it is possible to build this rear section in one of two ways, either as shown on the plan, or by using the half-shell method and making two parts, then cementing them together. In this case the keel should be cut from 1/8" balsa instead of 1/4" and two of each must be made. It will also be necessary to make a reverse drawing of the side on which to build the second half. These are then glued together to form the complete rear fuselage section. Note that the lower keel comes forward to former F-1 as initially built. The cabin and nose formers are attached to the rear section as shown and the blocks which create the nose shape are easily carved since the formers establish the final form, but carefully note the hollowed area under the nose. It is essential to carefully follow the plan detail "A" for the cabin sides to get



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the proper shape as shown in this area. The balance of the fuselage construction is fairly standard and the only problem will be to find a fuel tank to fit, since the one used in the original model as shown, is, unfortunately, no longer available.

On the original model the dummy engine cylinder on the left side was built up of wood and cardboard discs with real bolts and glow plug in the head. It was painted with epoxy paint to match the real engine on the other side and has fooled many into thinking that the model was powered with a twin! The dummy exhaust pipes were fabricated from dowel with the bends formed in wire bent to shape and inserted in holes drilled in the dowel ends. The bend was then filled and shaped with epoxy putty to match the size of the dowel.

The wing is time consuming, but not too difficult to build, the only problem area being the center section which has the cabane strut epoxied into it. Also, although not shown on the plan, it would be wise to cement 1/16" balsa webbing with vertical grain between the forward wing spars.

Tail surfaces are easily made from sheet balsa although they could be built up to cut down some weight since this, like almost all scale model aircraft with short nose moments, will come out tail heavy and require the addition of extra nose weight to balance properly.

The completed framework was covered with Silron and painted with Cub-yellow dope which was lightened in color by mixing in some white. Aeronca yellow is not as deep in color as Cub-yellow.

The finished model is quite close to scale although it should be noted that the crash pad above the instrument panel is incorrect as shown on the plan. This should cover the entire area above the instrument panel and not just the center. The one shown was characteristic of the earlier C-3 "Collegian" or "Razorback" versions and was changed on this "Roundback" model. Also please note that the louvres on the right side of the cowl open to the back, and those on the left side open forward. Unfortunately, this is not clearly shown on the plan.

All scale models look best in flight with a pilot in the cabin, and if you wish to add one it is necessary to build a removable platform into cabin former F-3 to accommodate a 2" scale Williams Bros. sportsman pilot.

For any other details and an interesting, complete history of this aircraft, with an excellent 3-view drawing, see Paul Matt's "Historical Aviation Album" Volume 10.

The model flies easily, and will take-off unassisted after sufficient speed has been built up. It would, in fact, do well as a big free flight model. All scale models of this type do best if not over-powered and the McCoy .19 originally fitted is adequate power, although engines up to about .29 or .30 could be used.

You will win no pylon races or pattern contests with a model like this, but if your idea of happiness is the sight of a beautiful scale model floating lazily around in the clear blue sky, you cannot help but enjoy this one. Who knows, you might even win a scale contest with it! □

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