

# It's an "Aeronca Model L"

by Bruce Lund



Photos by the Author

Each of us gets turned on by certain aircraft or aircraft of a particular era. One scale nut I know of wouldn't touch anything but W.W. II. Another only builds W.W. I. My thing is the era of private aircraft that was developed just prior to W.W. II. This includes such classics as the *Ryan ST* and *SC*, the *Stinson Reliant*, *Piper Cub*, *Luscombe* taper wing *Waco*, *Fairchild F-24*, *Porterfield*, *Erco*, *Curtis Junior*, stagger wing *Beechcraft*, *Aeronca "C"*, and the little heard of *Aeronca Model "L"*. Three view drawings are available for most of these aircraft but sufficient back up photographs and cockpit detail is very difficult to come by. I wanted to model the *Aeronca "L"* for my 1971 Nats entry. The three view drawings were available in the May 1969 A.A.M. but the cockpit details were not shown and through much searching I was able to determine that there were only two *Aeronca "L"*s still in existence. Neither was located within 1,000 miles of my location. It was then that I had to abandon the "*Aeronca*" project and come up with another subject. I finally chose the homebuilt "*der Jager*," on which complete plans and photos were available.

Now that the Stand Off event is with us,

**Kind of a gentle bird, a Stand-Off Scale from decades ago. Pro Line brains, Enya .60 in the cowl. For active flying.**

I was able to go back to the "*Aeronca*" and model my first choice. A scale of 2" the foot was chosen. This gives a 72" wingspan and a model ideally suited to a .60 engine. It has a very thick symmetrical airfoil, which is scale, and a well positioned landing gear. The tail was enlarged slightly although the tail moment was not changed.

This model is very docile to fly, which is more than I can say for most Scale jobs. It will fly the required maneuvers with ease, touch and go landings are no problem. The model flies very realistically on about half throttle. Full throttle is only used on climb-out and uphill side of loops.

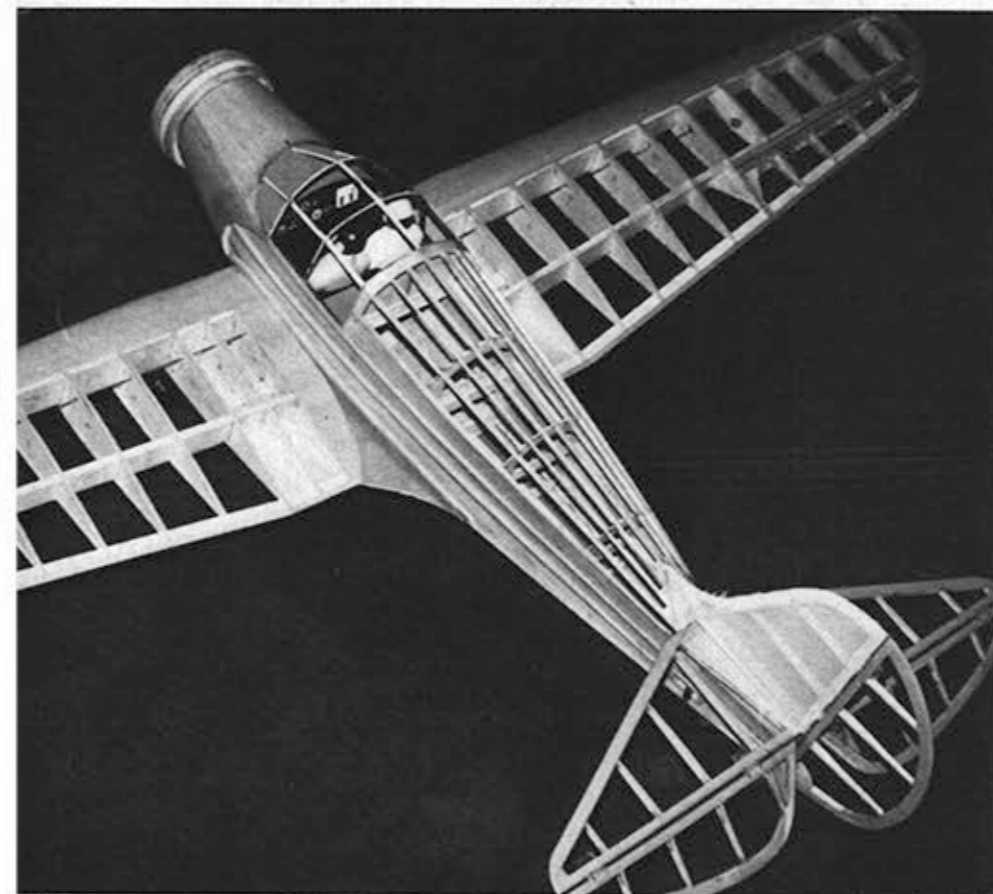
## Fuselage Construction

The *Aeronca*'s fuselage is not difficult, but I do a few things a little differently than most builders, so be sure to read the construction notes and study the plans. Because of the extreme bow in each fuselage side it is necessary to use a jig as shown

on the plans. This jig is simply built out of scrap plywood and shaped the same as the bow of the crutch. It needs to be 22" long and 6" wide. Cut two 1/8" balsa sheet sides, two 1/16" plywood doublers (F-12) and two 1/8" balsa doublers (F-13). Note that F-12 extends 1/4" past the front of F-13. With a felt tip pen mark the location of the doublers, formers and crutch on each fuselage side. Apply a coat of epoxy glue to one side of F-12 and F-13. Place these on the fuselage side. Place all three pieces on the jig, in place and apply enough weight to hold the parts against the jig over night. Remove the parts from the jig and repeat with the other fuselage side. Be sure to make a right and a left side.

While the sides are curing in the jig you can make the fuselage crutch from 1/4" square balsa. Add the 1/16" plywood cockpit floor and the 1/8" plywood F-15 to the crutch at this time. When the two sides have been removed from the jig, add the

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Spars and stringers come together to create the classic. The design is well stressed for flight. Below: A haunting look upon the apron. It rekindles old memories. Thick in foil, a sturdy design.

problems. The wheelpant is formed from 1/32" plywood glued over the plywood formers, L.G. 1 and L.G. 2. The two rear pieces are installed first with the front piece overlapping them. This whole assembly is glued to the wing.

## Final Assembly and Details

Fit the completed wing to the fuselage. Allow enough room to glue F-19 into place. Let F-19 dry while it is being held in place by the wing, after which Epoxolite can be used to form the fillet. Cut a piece of 1/16" plywood to the shape of the fillet at F-7 and

contour the Epoxolite to shape.

The tail wheel wire can be installed. Drill a 1/16" dia. hole 1/2" from the center of the Rocket City steering arm. This hole is for the rudder pushrod that is installed at this time. File a flat on the 3/32" dia. wire and secure the arm to the wire. Slip this into the hole in F-15. Solder a washer on the top side of F-15. Make sure the wire is free to pivot within F-15. Slip this assembly into the fuselage and glue F-15 to the 1/4" square crutch. Slip F-16 over the wire and glue to the fuselage sides. Note that F-16 overhangs the sides to align with the bot-

tom 1/8"x1/4" stringers. Add some 1/8" sheet balsa from F-16 back to the tail post.

The engine cowl can be made of balsa, fiberglass or plywood. I used plywood turned on a lathe. The cowl is held to F-1 by three sheet metal screws. The engine shroud was made from fiberglass using the balloon method. Dummy cylinders are 1 1/2" scale William Brothers, Pratt and Whitney. They are modified by cutting the rocker arm covers and part of the rear cylinder off. These are glued to the ring cowl with the engine shroud over them. Note that the bottom cylinder was omitted to allow plenty of cooling air to reach the Enya cylinder.

F-4 and F-5 can now be added to the cockpit. Use 1/8"x1/4" spruce bracing between F-4, F-5 and F-6. Three pieces of coat hanger wire extend from F-4 down to the cowl. Finish the interior of the cockpit at this point. Williams' Brothers 2" Sportsman pilots fit well but must be raised by adding 3/8" under them. When you are satisfied with the interior, glue celluloid over the cockpit. Note that the two pieces over the pilots heads are dyed green. The 1/32" plywood is added over the cockpit last.

The "*Aeronca*" should be sanded and covered in your usual manner. My model is covered with nylon and painted with Sig dope. Cover the fuselage bottom first, then use one piece of fabric to cover the top and sides. "*Aeronca*" Model *L*'s were painted Loening yellow with black lightning stripe and numbers. (Lemon yellow is close.) With the receiver wrapped in foam, placed behind F-6 and your battery between F-2 and F-3 on top of the 12 ounce fuel tank, your model should balance 4" behind the wing leading edge at the fuselage. A Tatone EM-S muffler on your engine will complete your model.

## Flying the Aeronca

Do not overpower this model. I am using a very tired Enya .60 and seldom open it up. This model does not have bad ground looping tendencies. It will take off in less than 100 feet on a paved strip and it's slow flight characteristics must be experienced to be fully appreciated. I have finally built a scale model that can be flown just for fun. If you decide to build the "*L*" and run into problems, drop me a line care of this magazine and I will be glad to assist you in any way that I can. Good luck and fly safely. ☺

