

The Aamco Quickray 500 kit had been sitting on the "I'm gonna build it soon" shelf for a few months. In fact it was to be one of my "winter projects". As it turned out, winter came and went without most of the planned projects being built and, when spring sprung, only one airplane was flying. The backup Pattern ship was started but got bogged down in the painting and covering stage when disaster struck. The only flyable ship was broken, the backup wasn't done and I really wanted to fly. I borrowed a friend's Quickee 500-type racer to use in a Pattern contest (I came in last) and that brought the Quickray kit to mind. Then, when our club decided to have some informal Quickee 500 races, I couldn't put off the kit any longer.

The Quickray 500 is manufactured by Lou Andrews (he also designed it) at Aamco, US1 & North St., Box 231, Topsfield, MA 01923. The kit is all balsa and lists for \$47.95. Lou offers standard distributor discounts on all of his products which tend to make his kits available at very competitive prices once they reach the various types of retailers around the country. For those of you new to R/C, Lou Andrews is the man responsible for the famous Aeromaster biplane design that is still one of the most popular airplanes ever flown.

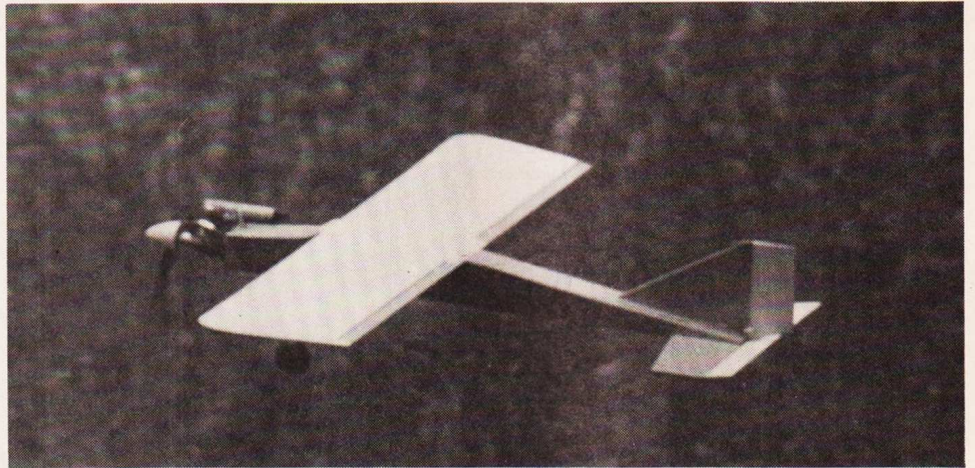
Coming up with an airplane for any one of the many competition categories that exist in model aviation that is truly different is getting to be a difficult job at best. Coming up with a different design in Quickee racing, where the design parameters are so rigidly spelled out in the rules would have seemed to be impossible. That is, before Lou Andrews tackled the problem. Lou is a conservative New Englander who wouldn't design something different just to be different, it has to be better.

The Quickray has a high wing configuration for three reasons. First, it lessens landing gear mounting and shock problems in the design. Secondly, the high wing sets above ground effect quicker on takeoff and gets the airplane flying faster with good control and third, it makes interior access easier. Now, this obviously isn't the first high-wing Quickee, it also isn't the first to be designed to the minimum standards as set in most racing rules, what is it that makes it different? Look at the tail end of the ship. All of the other Quickee racing designs pull the sides of the fuse together at the tail before attaching the horizontal and vertical tail surfaces. This method of construction, although it's very popular in many types of airplanes, leaves an inherent weak point just forward of the leading edge of the tail surfaces. Even if the airplanes do not break in that spot, there is the problem of flexing there that not only can make the airplane fly erratically but that can weaken the glue joints that hold the tail surfaces on. The method that Lou uses on the Quickray 500 is to keep the width of the fuselage the same all the way from the firewall to the tail and to bring the top of the fuse down to meet the bottom. This gives a very rigid mounting platform for the horizontal stabilizer to glue to. There is a slot in the top sheeting that then allows the vertical stab to be glued directly to the top of the horizontal stab as well as to the top sheeting itself. This ties the whole tail assembly together in a very rigid and light structure. That's what's different about the Quickray 500.

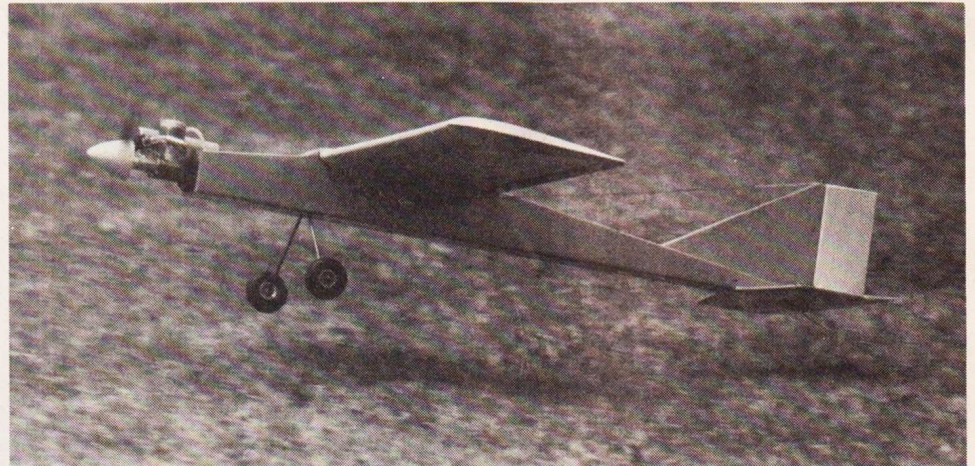
The front end of the fuse features Aamco's Box-Lok® construction. This system of building almost makes it possible to build the fuse

Aamco's Quickray 500

Something a little different in a Quickee racer/**Bob Hoeckele**



PHOTOGRAPHY: JIM BOYD



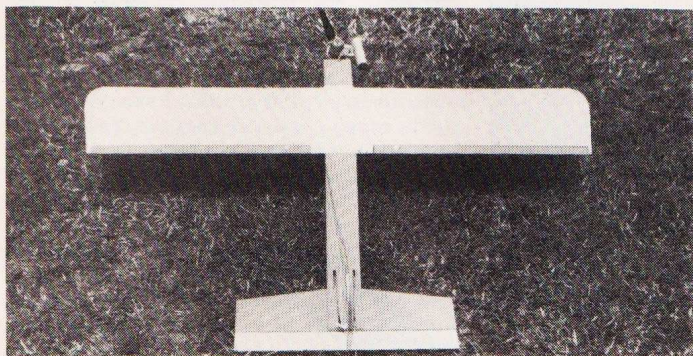
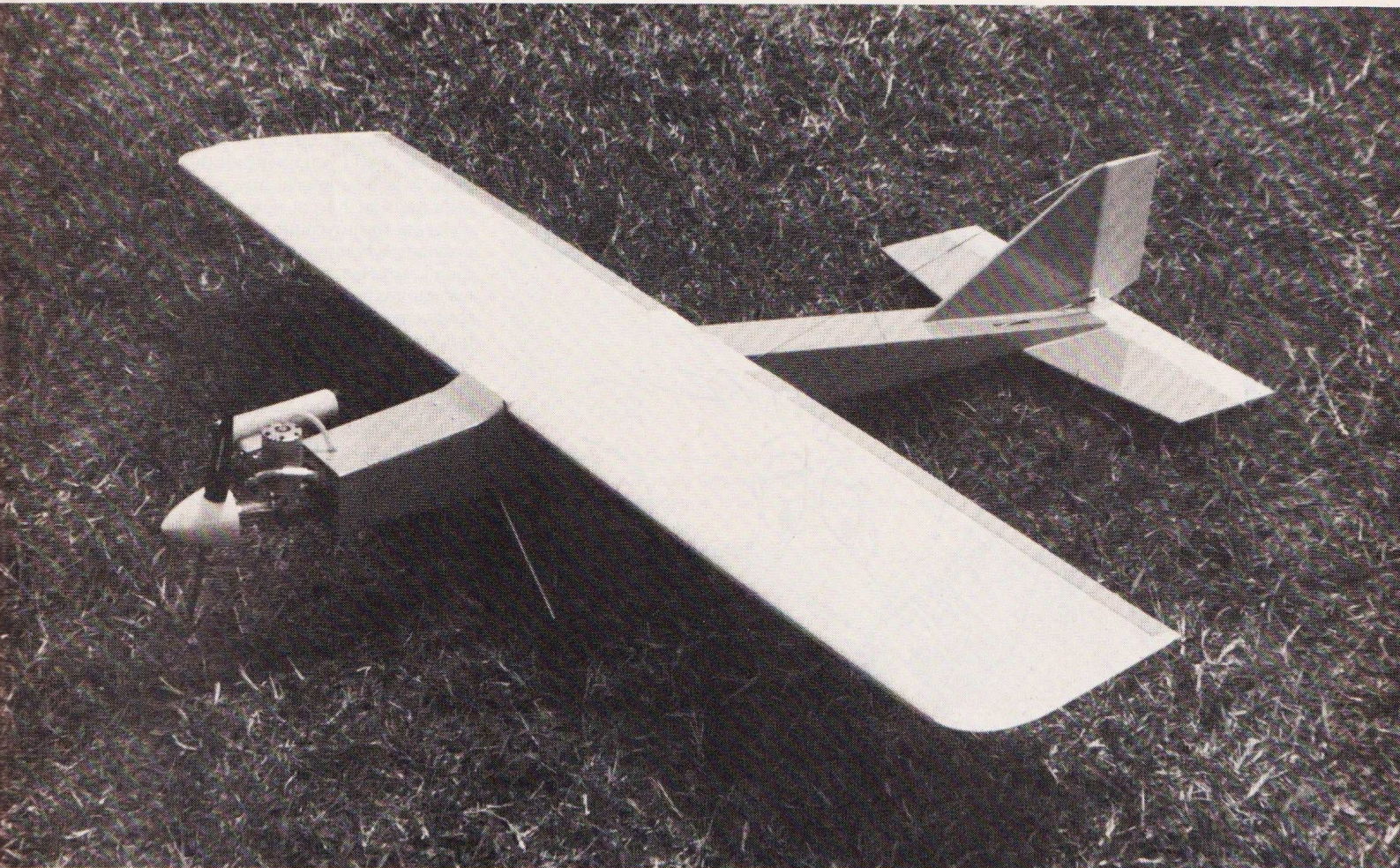
in your hands and have it come out square and straight. Ask anyone who has ever built an Aeromaster fuse. The landing gear is $\frac{5}{32}$ " music wire that is pre-bent and is built right into the fuse at the wing leading edge bulkhead. After ten flights with about eighteen landings on a grass field, I can attest to the strength and durability of this landing gear system.

The wing can be built either in one or two pieces. One piece is definitely recommended as that will invariably be the stronger and lighter method. The only thing to watch out for on the wing construction is the fact that the airfoil is not symmetrical. Make sure that you're putting the ribs onto the bottom spar with their flatest side down. Other than that, the wing is simple and quick to build.

Be sure to follow the construction sequence

provided on the printed sheet of instructions. I built the fuse first and, because everything goes together so easily and well, kept on going past the end of the instructions and installed the fuel compartment hatch and the fairing block just in front of the leading edge of the wing. Later, I had to cut the block back out and make a new one because of the wing mounting dowel hole that I neglected to drill. Follow the instructions.

I used Goldberg's Super Jet to assemble this entire airplane except for the hinges, wing mounting dowel and landing gear where it was five-minute epoxy. The entire ship was covered with MonoKote and a Bridi engine mount supports the K&B .40 front rotor engine. The radio is my MRC 775 with MR-60 servos. Even with my bumblng the front block, the project took only 15 hours to



This view from the rear shows the constant width fuselage to good effect. It is strong and easy to build. Bob gives us a look at the undersides (right). Strong landing gear mounts for rough fields. Generous rudder.



complete over a six day period. With a concentrated effort a determined builder could conceivably open the kit box on a Friday after work and go flying on Sunday morning.

Other than a very rich engine run, the first flight was uneventful. There I was, holding full up elevator while advancing the throttle on this taildragger, waiting to have to drive it straight down the runway with right rudder to prevent a ground loop—and it never happened. Just the slightest bit of right held the airplane dead straight and off she went. The ship required slight aileron and elevator trim on the transmitter to fly straight and level into the wind and gave no indication of needing any c.g. changes whatsoever. The ship was balanced as per the plans and required no additional weight at all. By the way, the plane weighed 3 lbs. 11 oz. dry, only

three ounces over the minimum Quickee 500 rules weight. Those three ounces can easily be trimmed through the use of more sandpaper on the tail surfaces and skinnier, lighter racing wheels.

The control response is very good on the rudder and elevator. The aileron response seems a bit slow to me but friends who fly Q-500 races say that it's just right for racing. I was never a fan of using bellcranks in the wings and a servo mounted on it's side. It's tongue rods for me but the trouble of changing this ship to accommodate that was not really worth the effort. The bellcranks always struck me as too much linkage and too many things to go wrong. Because of that, or maybe the reason for it, I always screw it up. My aileron linkage is a little tight so I'm drawing more from my batteries than I should but the

servo doesn't seem slower than the others.

The airplane is capable of a lot of maneuvers besides just going fast and turning left. It tracks nicely on both inside and outside loops and does a creditable stall turn (it has lots of rudder for a Quickee). Rolls are somewhat slow (probably be my aileron hookup) and the ship needs a good bit of down in the inverted position. Initially I thought that the ailerons were losing effectiveness on the slower landing approaches but now I realize that it was just that I was not use to the slower general aileron response.

In general the Aamco Quicgray 500 seems to be one of the strongest Quickee designs now available that builds easily and within the 3½ lb. weight limit. It flies exactly like it's supposed to and exhibits no bad tendencies at all. Lou Andrews has done it again. 