

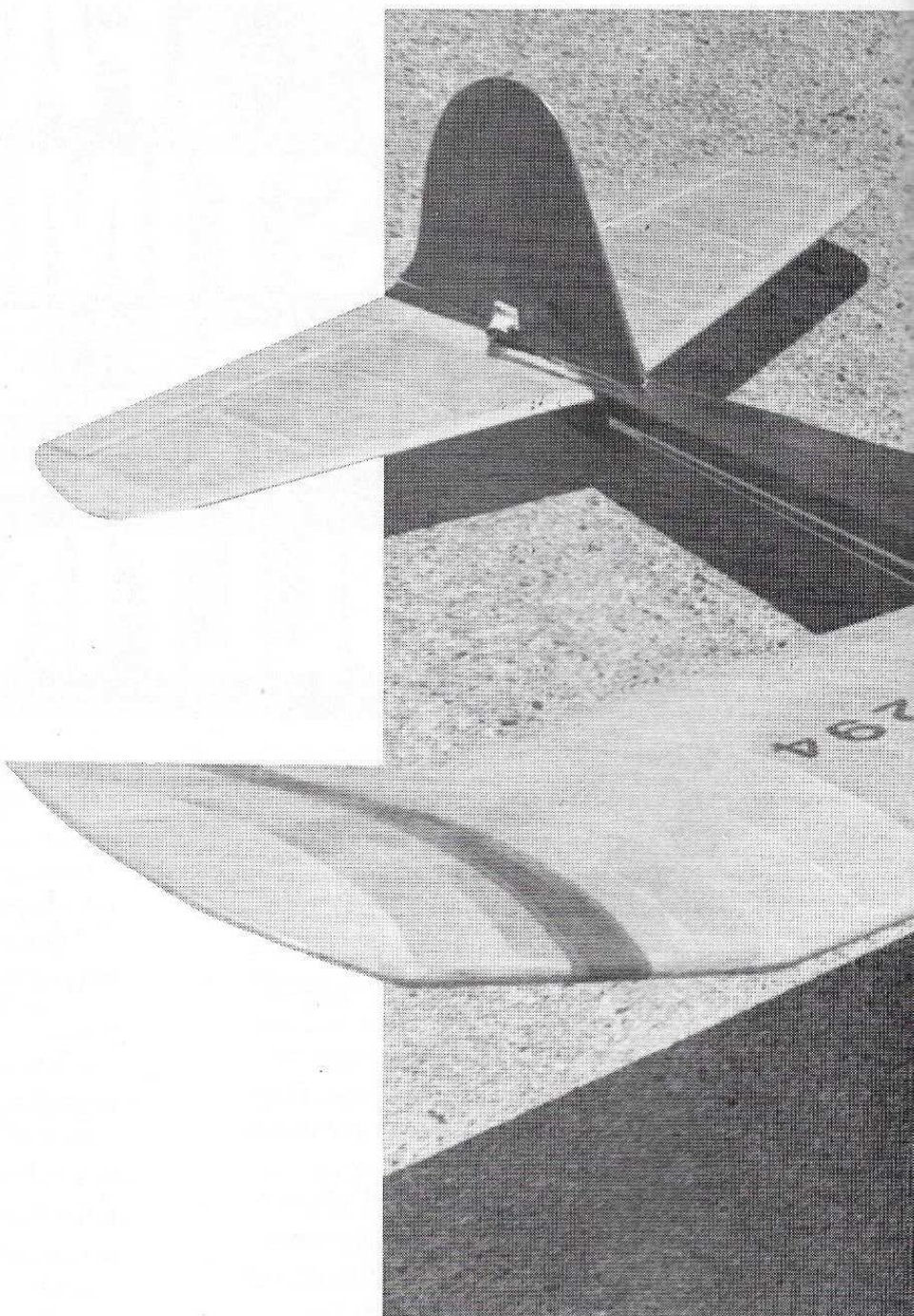
Most R/C'ers by now know how much fun it is to fly old time free flight designs with the aid of modern radio gear. SAM (Society of Antique Modelers) membership continues to grow, and competition in this aspect of modelling continues to increase in popularity. Under SAM rules, the old time designs can be scaled up or down to suit whatever size powerplants and type of competition we want to pursue. One of the newest SAM events is ½A Texaco; Bob Aberle provided a good writeup covering this event in his *Tatone Atomizer* article which appeared in the October '91 issue of **FM**.

The name helps define the highlights of the event. The .049 engine size is used, while Texaco is a reference to the old rules where the amount of fuel carried in the model was limited, rather than the length of engine run time. In this class, the maximum flight time is 15 minutes, and you usually get three attempts to make two official flights. In the event of a 30-minute tie, the tie breaker fly-offs might be unlimited, with no maximum.

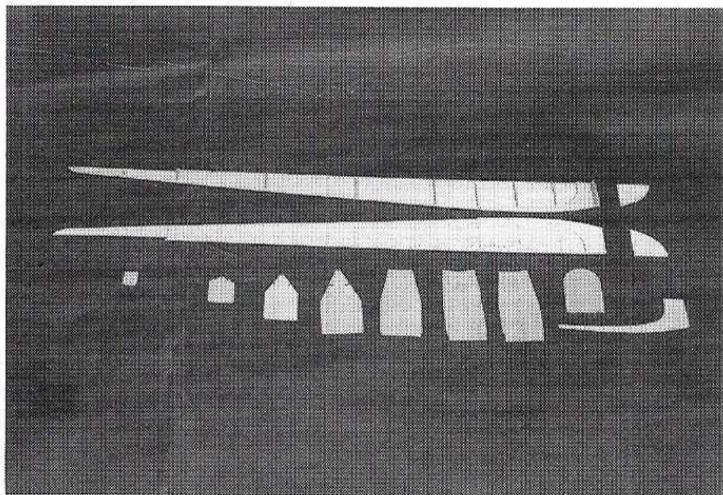
The engines are more specifically limited to the .049 Cox reed valve type, fitted with the Cox 8cc fuel tank. Such engines as their Golden Bee and Black Widow are used, along with their new Texaco model, engineered and produced just for this competition class. The aircraft used must have a minimum wing loading of 8 ounces per square foot; for a 300 square inch wing area, this means the model would have to weigh at least 16.7 ounces. It turns out that an .049 will power an aircraft of about 300 square inches very well, and such a plane, with radio gear, can be built to the minimum weight.

There are some choices to be made here, as you could build a smaller model, keeping it light for performance, and the smaller, lighter aircraft should be able to climb to a higher altitude for a potentially longer duration flight. But a larger model, with more lifting area, although it might climb slower, should soar better and have an easier time staying in the thermals for longer flights.

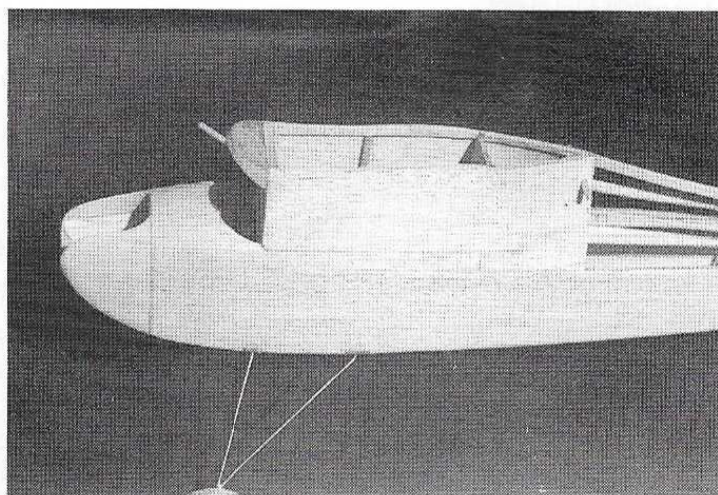
There's a similar choice to be made with the engine and the way you operate it. With a 6-inch prop and high nitro fuel, the higher power output will climb an aircraft faster and higher; but running the engine slower, with a larger prop and lower nitro fuel, will give a considerably longer engine run and may also produce a long flight duration. Using a 7-inch



PHOTOGRAPHY: DICK SARPLUS



All the sheet parts for the fuselage have been cut, and the square fuselage former gussets glued in place (above left) so the fuselage can be assembled.



The upper fuselage is a combination of stringers and a sheet sided cabin (above right). Construction is similar to the original *Buzzard Bombshell*.

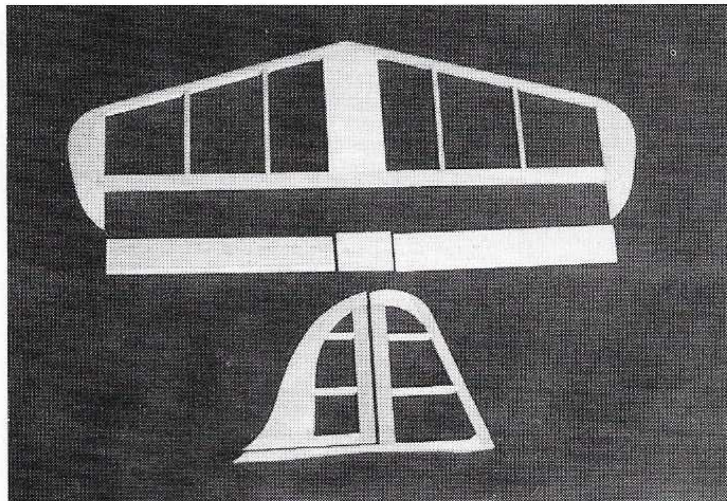


1/2A Texaco Old Time:
Baby Bombshell

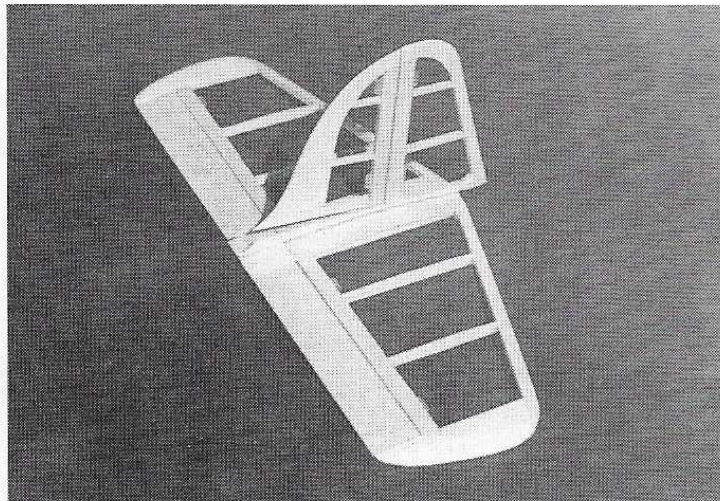
By Dick Sarpolus and Bob Peru

Here's a 20% enlarged version of Joe Konefes' 1941 mini-classic for Old Time R/C's most popular event. Doubles the fun as a great 2-channel sport ship.

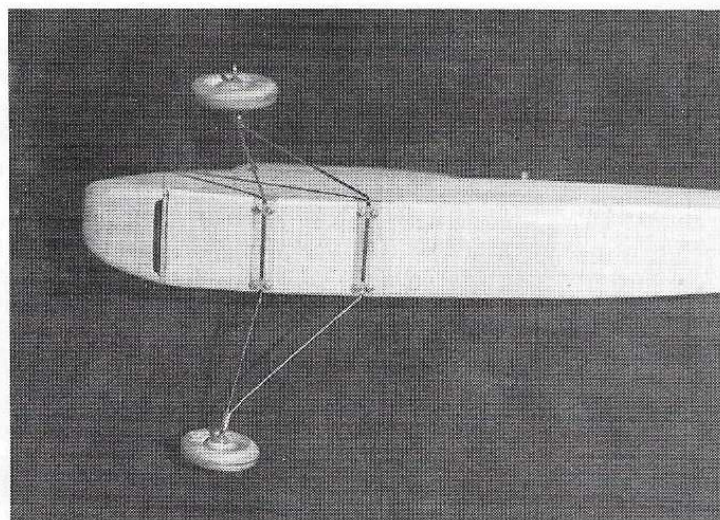
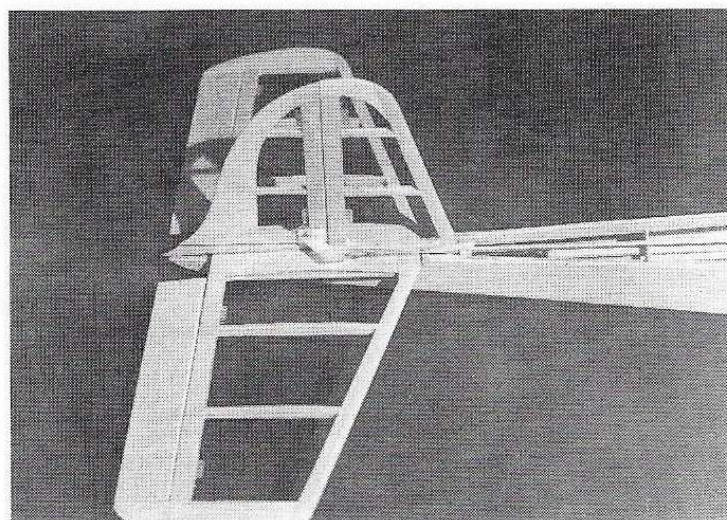
1/2A Texaco Baby Bombshell + 20%



Since this is a 1/2A, choose your wood carefully. Find the lightest possible. All the tail surfaces (**above left**) are a combination of sheet and strip stock. The vertical fin is first aligned and glued to the horizontal stab (**above right**) before



being glued to the stab fuselage saddle (**below left**). Of course, check alignment. Laminate two strips of 1/16 ply for each landing gear "block" which are glued to the fuselage bottom underneath formers F2 and F3 respectively.



or even an 8-inch prop and mild fuel, four minutes or longer for an engine run is pretty standard. Some competitors use special fuel, low nitro and lower oil content, for longer runs; combined with the use of an 8-inch prop, they might get an engine run of seven minutes or more. They also might have trouble with an engine overheating and cutting out early. The different approaches which can be taken result in interesting competition.

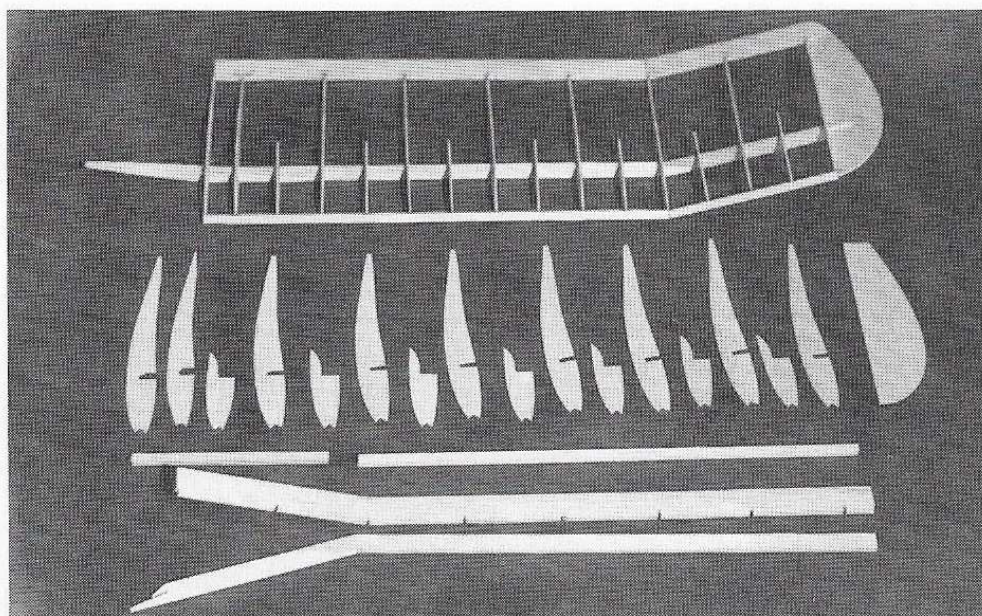
When it comes to the choice of aircraft for 1/2A Texaco competition, you can search out a lesser known design such as Bob Aberle did with his Tatone *Atomizer* mentioned earlier, or you can go with a well known, proven aircraft. Many of the old time aircraft designs have been scaled down to modern .049 size for this class; the project presented here is based on Joe Konefes' classic 1939 *Buzzard Bombshell*. This design has been popular ever since Konefes and his buddies in the Buzzards Club of Chicago did so well with them in the 1940 Nationals meet. Joe placed first, getting a 49-minute flight, and his friends placed 3rd and 5th, also with the *Bombshell* design.

The original *Bombshell* was built with a 72-inch wingspan, and powered with the .60 ignition engines available at that time. Free flight competition design had begun to switch over to the pylon configuration, getting away from the cabin layout. Konefes' design

showed that a good cabin model, complete with plastic windshield and side windows, could still compete with the pylon jobs. When he won the '40 Nats, it probably slowed down the move toward pylon designs, at least for a

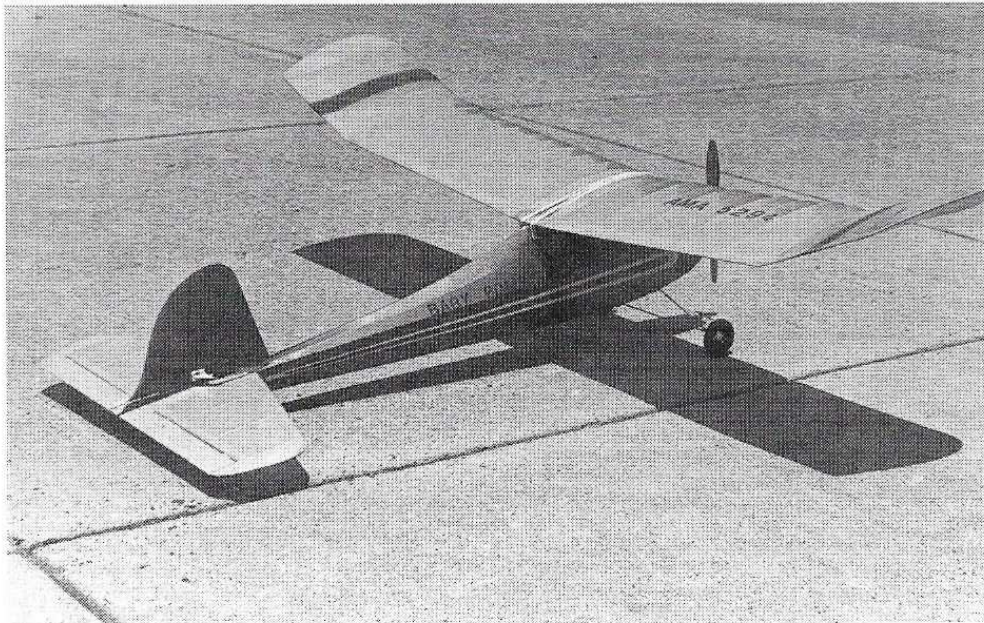
while.

Around 1941, a smaller *Buzzard Bombshell A* or *Baby Bombshell* version was kitted by Maircraft; it had a 36-inch wingspan. Bob Peru recalls that for a time, *Air Trails* mag-



Wing construction omits the sheeted leading edge of the original large *Buzzard Bombshell*. To eliminate sag between each wing bay and maintain the airfoil shape, partial ribs are added between each full rib.

1/2A Texaco Baby Bombshell + 20%



This model was enlarged to 42 inches from the 36-inch span *Baby Buzzard* kits given away by the old *Air Trails* magazine, as a subscription inducement. The 20% enlargement is just right for .049 power.

Magazine was offering to give away *Baby Bombshell* kits as a gift bonus for subscribing to the magazine. The kit at the time cost about \$1.75, he believes. Bob subscribed to the magazine and received his kit in the mail; but the local mailman had folded the kit package in half to make it fit in his mail bag! I doubt if Bob built that one.

For today's use, 36 inches made a model a little too small for an .049, so Bob took the 36-inch *Baby* design, enlarged it by 20%, and ended up with the 42-inch wingspan, 300

square inch version presented here, an ideal aircraft for 1/2A Texaco competition or just plain fun flying. It's interesting that Joe Konefes worked up a smaller version of the *Buzzard* just a few years ago; he did a 30-inch wingspan, for free flight use, with a small CO₂ engine. Here it is fifty years after the original design, and Joe is still having fun with his creation.

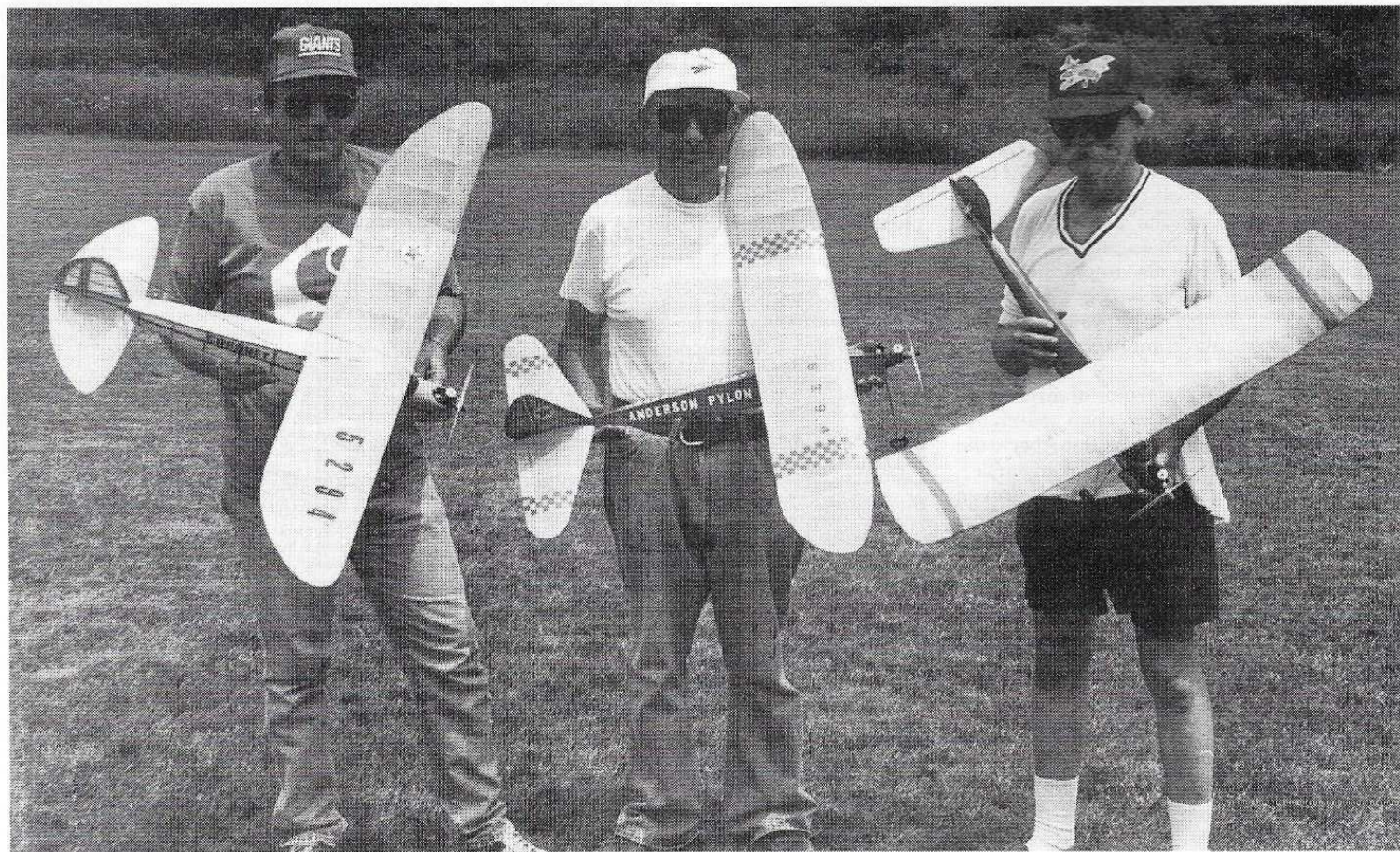
Construction of this version is just about like the large original design, except for the use of partial ribs and elimination of the

leading edge sheeting on the wing. Select good, light wood and cut out the parts; making your own kit will enable the building work to proceed without interruption.

Even with the undercambered airfoil, the wing panels can be built on a flat work surface, over the plans. The four panels are built separately, then joined at the proper dihedral angles. The center section ribs will need their spar notches enlarged a bit for the plywood dihedral doubler. The plans call for a bit of washout in the tip panels, and this could be put in when applying an iron-on film covering. Actually, the plane flies fine without the washout. A little light fiberglass cloth and Hot Stuff cyanoacrylate glue will reinforce the polyhedral wing breaks and the center section joint.

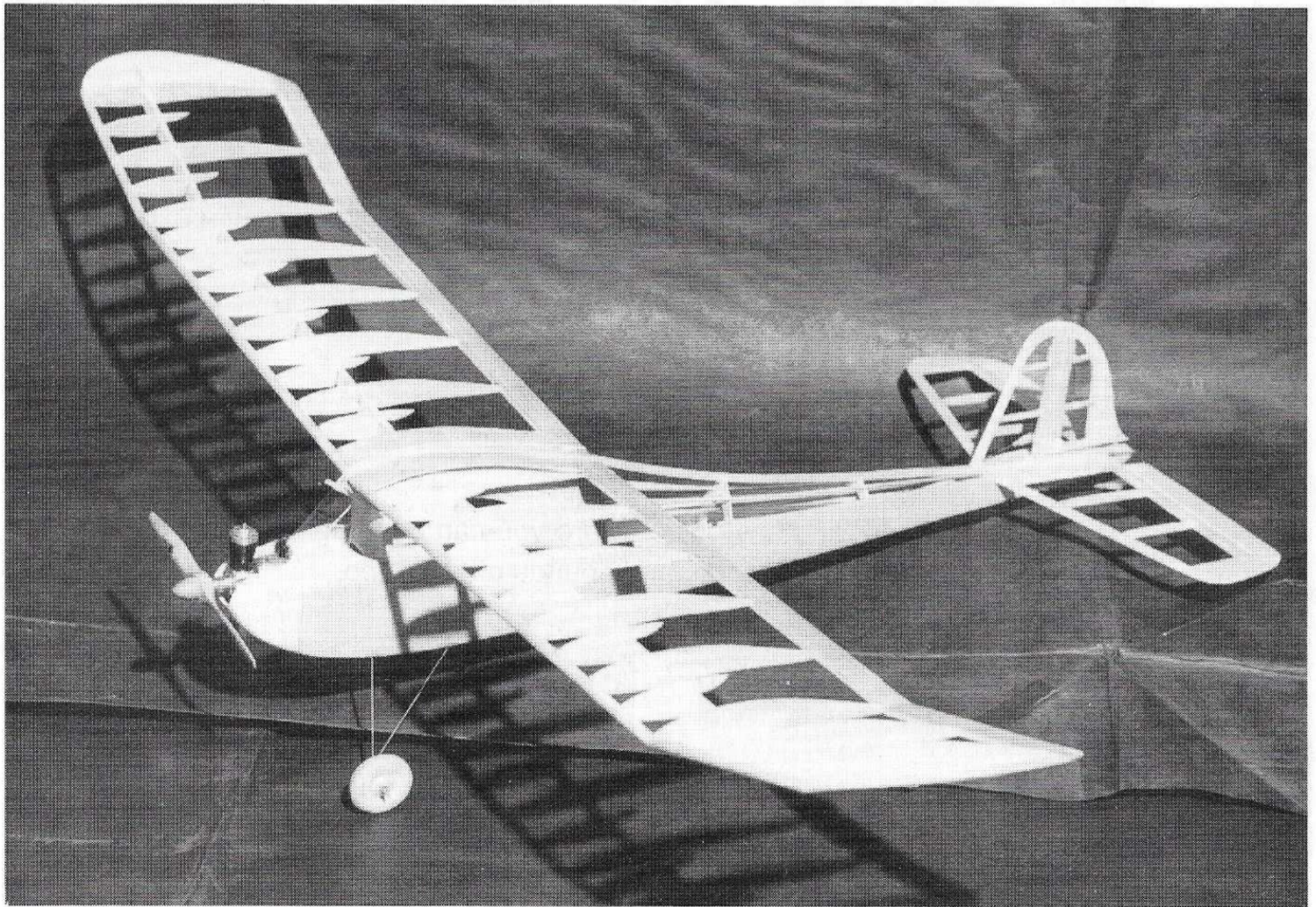
The tail surfaces are also assembled over a flat work surface, building over the plans. Use a 1/16-inch wire joiner between the two elevator sections. The new thin sheet plastic hinges, such as Ace R/C's Hot Hinges, require only a narrow slot in the wood, and are the easiest to install. Keep the tail surfaces as light as possible; with the long tail moment of this design, it's easy to end up with a tail heavy model if you're not careful.

The fuselage is basically sheet balsa sides over balsa formers, with the rear top section left open for covering over a few stringers. Make up the two fuselage sides with their balsa doublers behind the firewall position, and join them with the forward five formers. The rear of the cabin section is pulled together at the top, by the wing trailing edge position. When adding the rear formers, keep the fuselage straight; it may be helpful to assemble that section over a straight center



Half-A Texaco has really caught on and these three gentlemen display some of the more popular planes used. At the left is Lou McGuire who holds his

Coronet. Marv Stern, in the middle, holds an *Anderson Pylon*. At the right, Dick Newcombe holds the 20% enlargement of the *Baby Buzzard* presented here.



With the framework complete, the *Bombshell* (above) is ready for any choice of covering. The popular plastic films will work well; Coverite's Micafilm offers

strength and the appearance of a doped finish. With the prop humming, Dick Newcombe (below) gets ready to launch. Wing area is 300 square inches.

line on the building surface. Dampening the rear stringers with water will help getting them in place. Cut out the formers as necessary for the servo and pushrod installation. Space in the narrow fuselage is limited, so small servos will be needed. A small battery pack, either 270 or 100 mAh, will also save weight. Pushrods can be made from firm $\frac{3}{16}$ -inch square balsa; they'll be strong enough and light.

$\frac{1}{16}$ -inch plywood strips are used to make up the mounting grooves to accept the $\frac{1}{16}$ -inch wire landing gear. As the fuel tank also serves as the engine mount, the battery pack can be installed right behind the firewall. Keep the receiver and servos as far forward as possible to achieve the correct balance point without adding any weight.

Any of the popular plastic film coverings can be used to save weight. Coverite's colored MicaFilm is very light, strong, and gives the traditional appearance of doped silkspan, appropriate on any old timer aircraft. Powered by any of the Cox .049 reed valve engines, this *Baby Buzzard Bombshell* will be competitive in $\frac{1}{2}$ A Texaco SAM competition as well as being suitable for relaxing sport flying.

If you don't want to scratch build a mini-*Bombshell*, the good news is that a kit for this $\frac{1}{2}$ A Texaco contender is now available from: Balsa Products Engineering, 122 Jansen Ave., Iselin, NJ 08830. Their kits are good, and this one would be a pleasure to build and fly.

So, build small old timers, and enjoy! 