



PHOTOS: JACK SHEEKS

## C/L "AT-9 JEEP"

by Jack Sheeks

**There is something about a twin that's hard to resist, and dual .30's stuck out front will attract a lot of attention.**

In order to get this whatever you wish to call it under way, we feel it only fair to give you a short run down on the ship modeled here. It was designed by the Curtis Wright Co. as a twin engined fighter. The Air Force bought the design, but decided to use it as an advanced trainer as they had faster designs already in production. Thus the designation of AT-9. Most of the pilots

trained on the AT-9 went on to become P-38 pilots, with a few going to bombers. The AT-9 was the fastest trainer of WW-II with a speed of over 200 mph and a landing speed of 90 mph. The ship was nicknamed the "Jeep" by the men who flew her and the name stuck. Probably because the ship was sturdy and could take a beating and still come up a winner. Many of the design

features of the famous P-40 can be found in this ship and if there had been more powerful engines available at the time we feel it would have made a good fighter. As it was, it only had 300 hp. Lycomings for power.

The model you see here is not scale, but could be called "stumble off" scale or some such designation. Who cares? The ship is different looking and turns in a respectful performance. Besides, isn't that what most modelers are looking for anyway?

We had another twin stunter in 1964 called the "Skyrocket" and we understand it still lives somewhere in the swamps of Florida. It was a ball entering it in Scale competition, doing our required laps for qualification, then going into the full stunt pattern. This brought the crowds to their feet. It also put the heat on the judges and we walked home with some mighty nice trophies and prizes.

The "Skyrocket" influenced a young lad of that era, Gary Alspaugh, who as he grew up became our TV repairman. As our TV is less than new, Gary has made many trips

to the old homestead. After each repair we would retire to the workshop, suck on a Pepsi, and have a bull session on models. Each time Gary came by he would get on my back about building another twin stunter. By the time he finished with me you would have thought it would be a disgrace to country, motherhood and John Wayne if we didn't start on one right now. (A hood? Mommy? Editor) I'm not sure what this guy has got, but he has a lot of it, as he sold me on the idea.

To get the ship started we did a little bartering with Dennis "the Menace" Duvall. He had a spare wing from Foam Flite that had been damaged in shipping. I think an anvil fell on it at the depot. We next made a secret trip to Hobby Craft for the best Sig wood in town. Why secret? Well it's not good to hit a working wife with what you have spent on your hobby all at one time. Some wives become violent over money you know. Besides, Doris, the owner of the model emporium lets me run a bill. This way you can pay it off little by little.

With all the goodies ready we got our less than new tools out and began construction of the ship. As work progressed we noticed regular visits from hawk-eye Gary, so there would be no mind changing in the middle of the job.

Before the dope was dry, we were receiving offers of free trips to the flying field with Pepsi's furnished. With the projected day of the test flight set, we thought we would witness other new craft make their first sorties. For once we might get a chance to give back a little harassment that we usually receive on first flights. Sweet revenge! However it was not to be as before we had finished with the ship, the wind was too much for the chicken hearts. What's 30 mph among friends? It took a couple of runs to set the engines as they only had three bench runs before being installed. We're not sure it that's guts or stupidity (No comments Irishman!) but



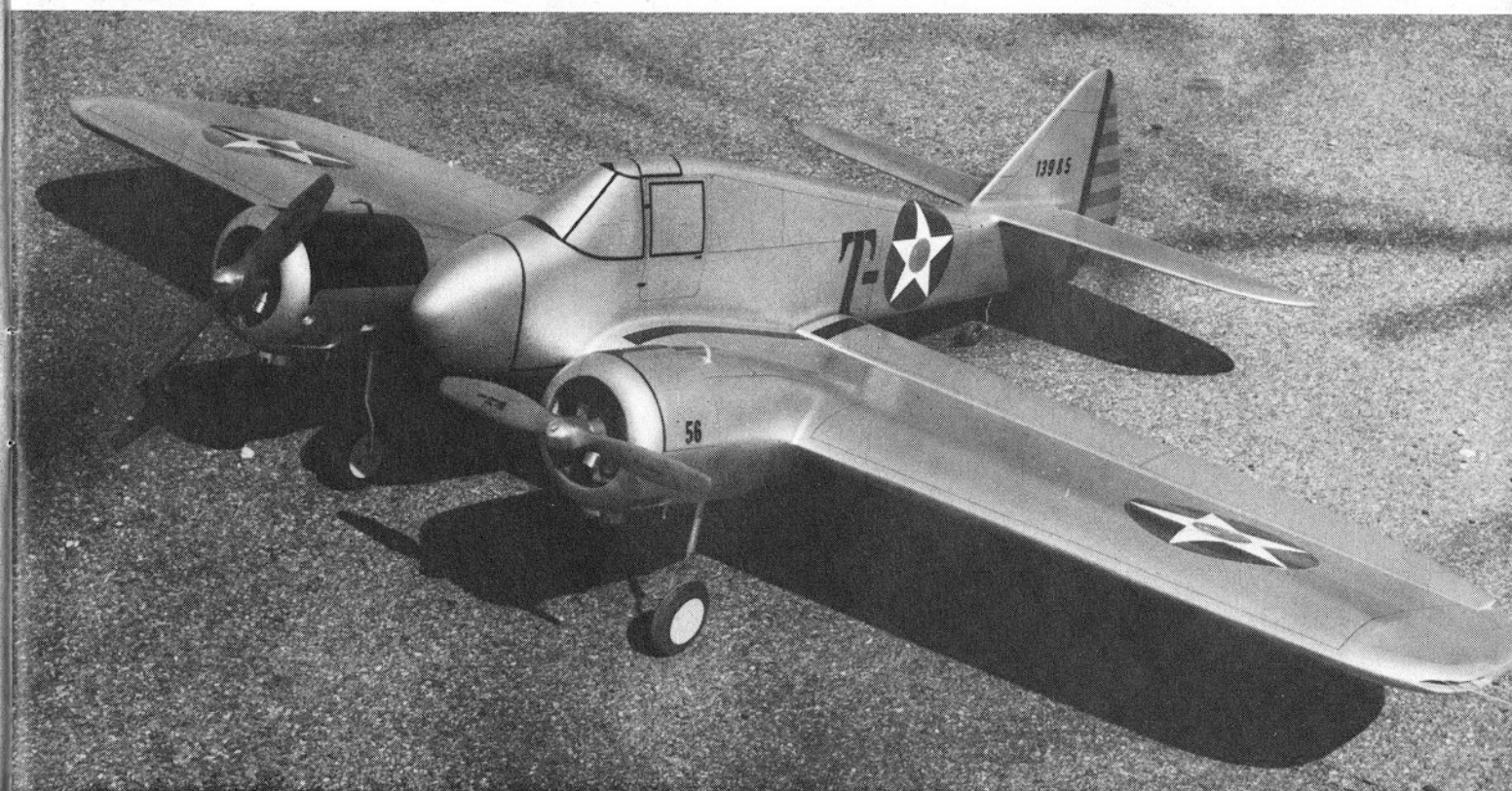
It's mostly all engine. Top Flite 10-4's on a pair of .30's. Going to see Hell's Angels instead of flying in one once saved FM's Editor from parachuting into Indianapolis. It went straight in. **Facing page:** Jack What'sisname. A good, spirited twin. **Beneath:** Thinned body, stunt flaps.

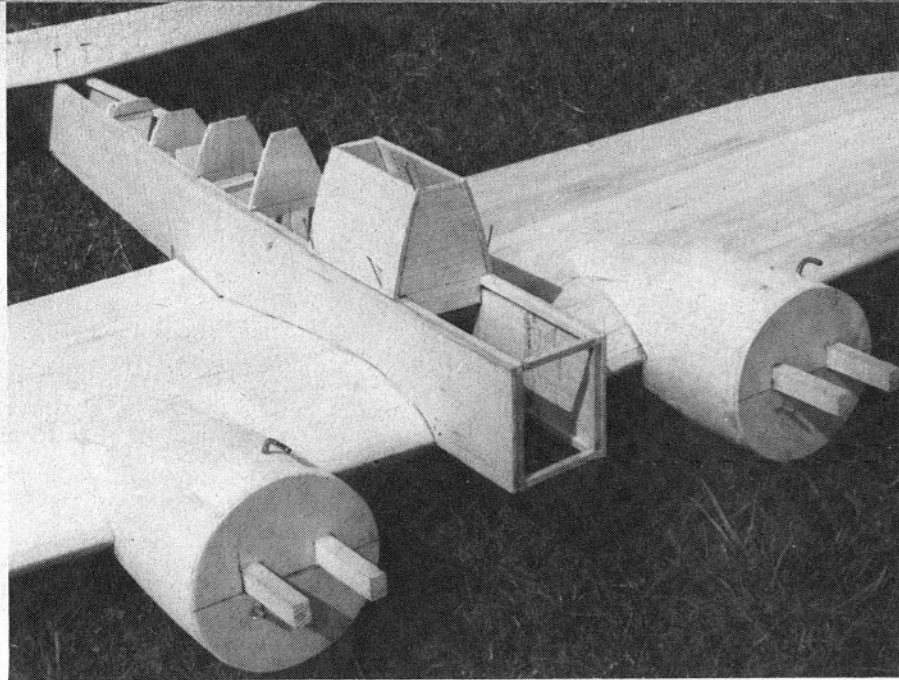
we had to go with what we had. So off to the church yard.

While Jerry Caldwell pitted my ship, Jim Vornholt was busy trying to take pictures with a broken camera. We didn't know it was fractured at the time, so you will have to take our word for how the ship performed. The flights were far better than we had expected. (I hadn't expected too much—Editor.) If you have ever seen Al Rabe's "Sea Fury" take off and land, then you will know how the "AT-9" makes it. It gets up on its gear and tracks beautifully on the ground. When landing, it sets down with no bounces on the main gear and travels for at least half a circle before the tail touches down. You'll find it worth flying this bird just to see these two actions. On the first flight the out-

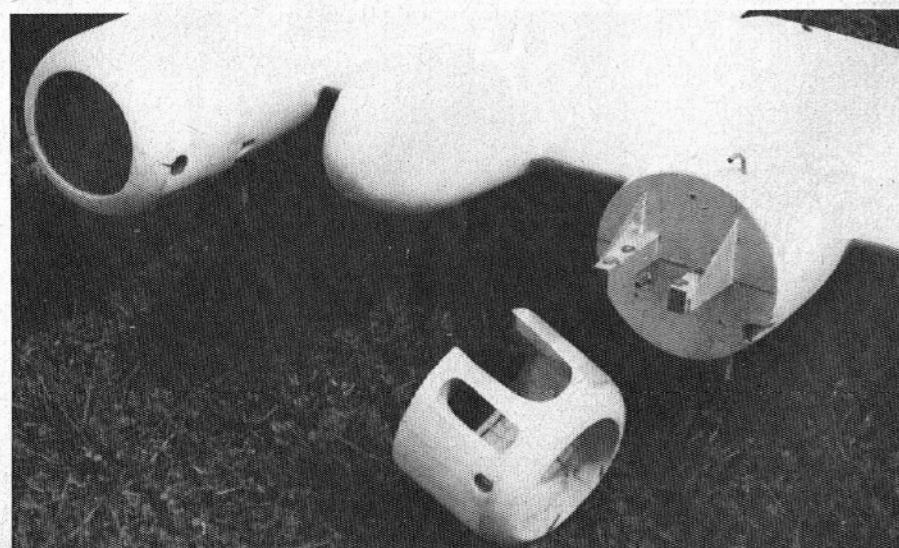
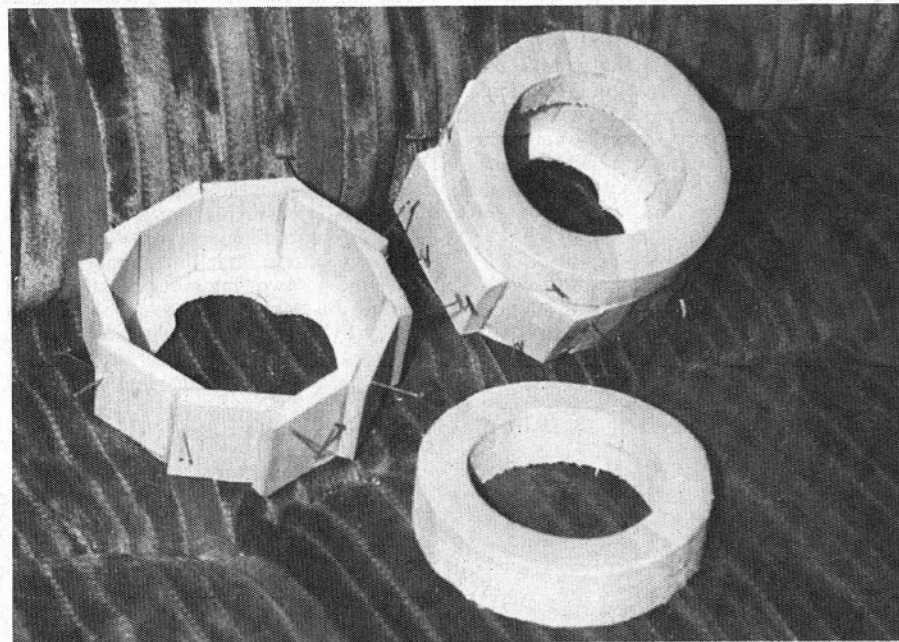
board engine gave up the ghost and quit (new engines). Jerry ran out in the circle yelling "don't do it." He thought I was going to continue the pattern on one engine. I actually wouldn't have tried it, but the ship pulled real fine on one mill and handled well enough to try it. Those OS .30's are strong for a small engine. We fired her up again and re-adjusted the needle valves, richer this time. It might be better off on muffler pressure for smoother runs. I hate to do it though, as we love the sound of two engines cranking on a little out of sink. (That's synch Jack, you do-do!—Editor.) Guess we'll have to get two more of Art Adamison's mufflers for it. He has the best mufflers going for my money.

On the next flight we performed all the





Not so hard. Jack wouldn't do anything that resembled effort. Sheet over foam creates the wing, a box-like body at this point. Roomy nacelles swallow the tanks. Below: Ring cowls form up like so.



inside maneuvers in the pattern and I was going to try the outsides, but by this time Jim and Jerry both were in the circle yelling not to until the engines have more runs on them and settle down a bit more. I slipped in as much as possible without getting my two friends too irate.

The AT-9 has very good potential for becoming a competitive stunter. The ship is a little nose heavy, but this is a minor trim problem that a little lead in the tail would cure. Other than this the ship has no bad tendencies. It pulls steadily on the lines in all positions. In fact if you turn those OS .30's on, you had better grab your socks and a tree stump as she really pulls. The test flight was made in 15 to 20 mph winds. I know this is high, but when you're hot to trot, you'll try most anything. All in all we feel you won't be disappointed if you build this craft, so if you're looking for something different and exciting, read on.

### Assembly Notes

The construction of any model begins by picking the best balsa available. I prefer Sig's balsa as they seem to have a better selection of light wood. As for the wing, we used a Foam Flite hollow Akromaster wing. It saves a lot of time and worry about building straight. Their address is 628 West 6th, Mankato, Minnesota 56001.

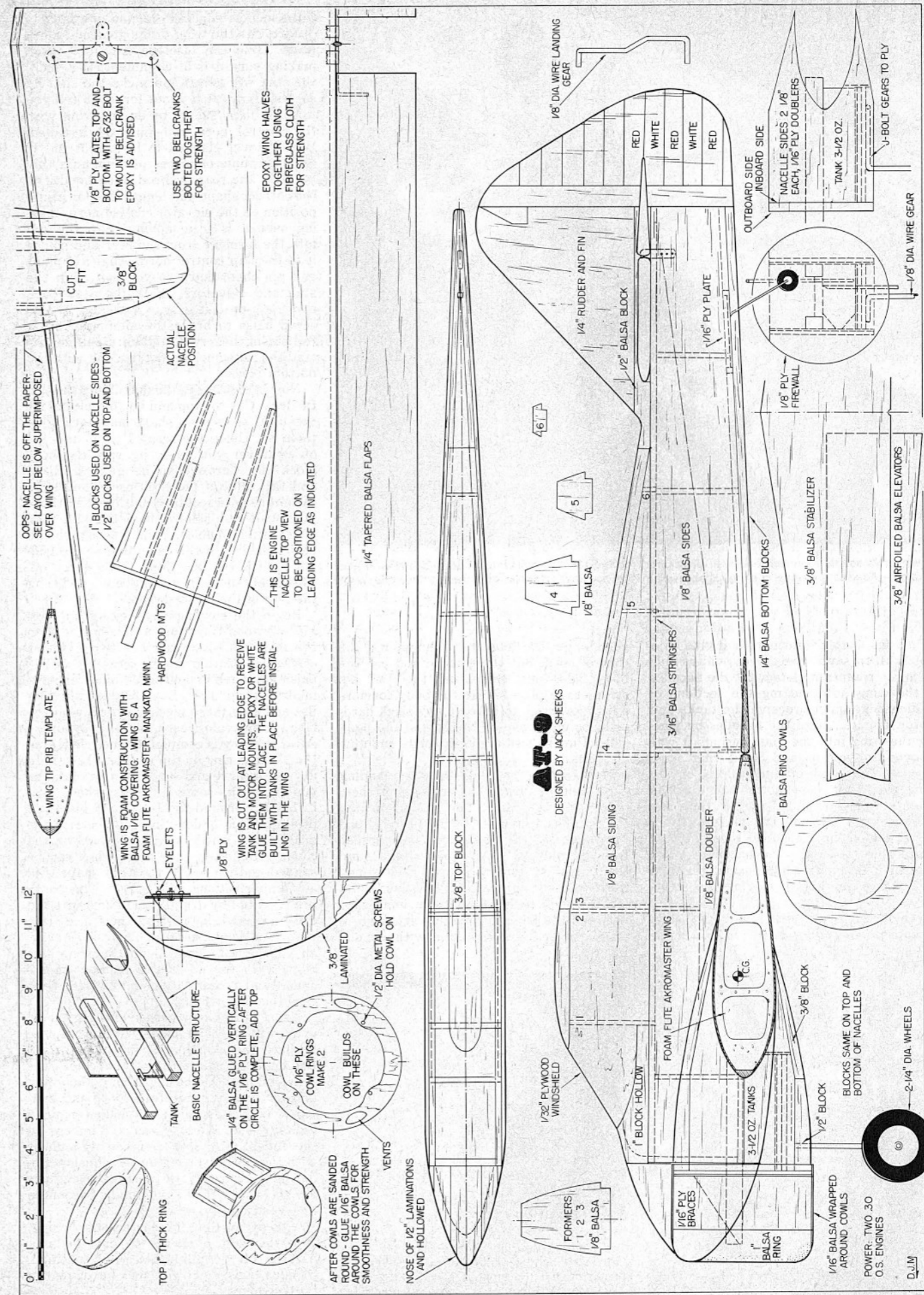
Begin by installing the bellcrank into the inboard section of the wing. Do this with a long 6/32" bolt and two nuts. Solder the nuts after the bellcrank is centered. Use 1/8" plywood on the top and bottom of the wing to hold the 6-32 bolt in place, then install the leadouts. Two bellcranks bolted together are advised to take the pull test for the twin, as well as heavier leadout wires. 5-minute epoxy puts the wing together, along with fiberglass cloth over the center-section. Set the wing aside and cut the nacelle sides out of 1/8" balsa and the doublers from 1/16" plywood. Make sure that both inboard nacelle sides are 1/4" shorter. Glue the doublers into place along with the 3/8"x1/2" motor mounts. Let dry and then cut the formers for the nacelles from 1/8" plywood. This includes the round firewalls. Re-vent the two 3 1/2 oz. fuel tanks and place them between the na-

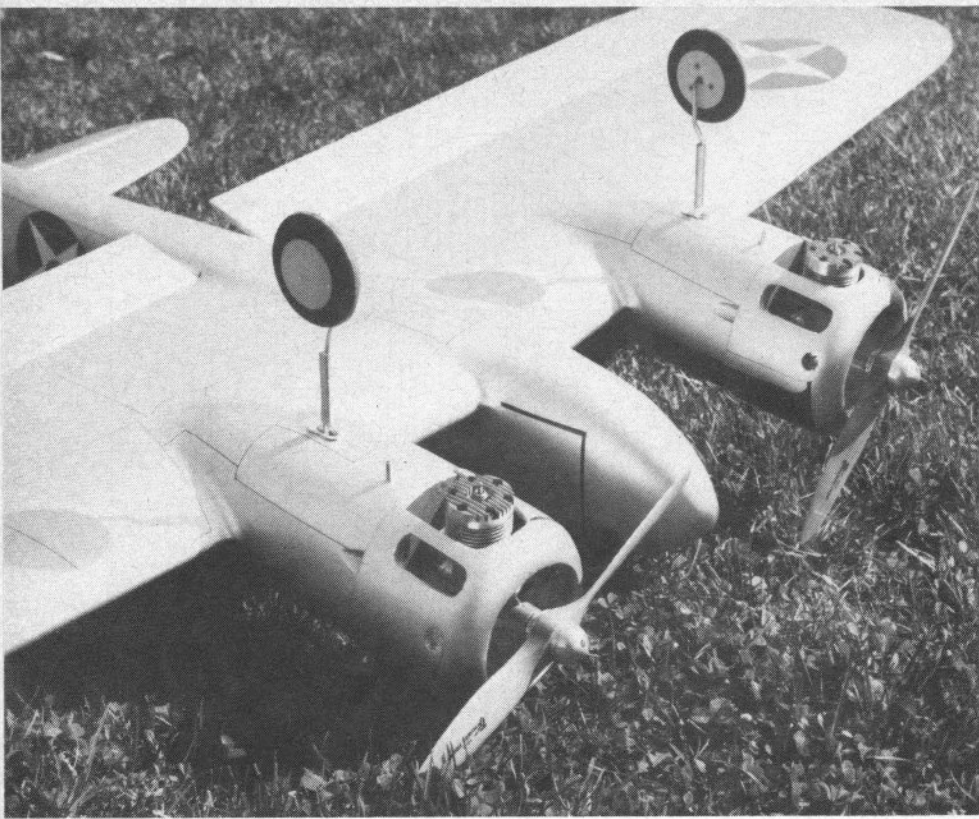
### Material List

- 1/16" balsa—2 sheets
- 1/8" balsa—6 sheets
- 1/4" balsa—5 sheets
- 3/8" balsa—4 sheets
- 1/2" balsa—2 sheets
- 1" balsa—2 sheets 6"x12" long
- All sheet balsa 3"x36" unless noted.
- 2—12x6" sheets 1/16" plywood
- 1—12x6" sheet 1/8" plywood
- 4—3/8"x1/2" maple mounts

### Hardware:

- 2—Top Flite 3" nylon bellcranks
- 1—Foam Flite Akromaster wing
- 2—1/16" leadout wires
- 1—1/8" landing gear wire
- 1—3/32" pushrod wire
- 2—3 1/2" Kraft slim wheels & 1" tail wheel
- 2—3" control horns
- 2—3 1/2 oz. Veco tanks or equivalent
- 2—Engines .23's to .35's or whatever
- 4—Sheets of Sig medium Silkspan
- 1—Set of MonoKote decals, pre-second World War
- 2—Sets of 4-40 hidden mounting nuts & bolts
- 2—Safety nuts to hold props on





The gear is solidly mounted and well positioned for the take-off roll. Model does beautiful wheel landings. Adequate engine cooling, space within the cowlings. Nacelles fair neatly into the wing.

celle sides, with the formers and glue with Hot Stuff to save time as you will re-glue all joints when completed. Fit the nacelles to the wing now, cutting the sections of leading edge out to receive the tanks and motor mounts. Align the nacelles by placing the wing into the foam casings it was shipped to you in and measuring from leading edge and trailing edges of the wing along with the motor mounts. The mounts will be a little higher than the leading edge, but you can make sure all things are on the same line. Use epoxy or white glue to adhere the nacelles to the wing as foam melts when normal glue hits it. Let this dry before moving the structure.

While you are waiting, cut the stab, elevators and rudder out. Sand to shape

and hinge the elevators, installing the control horn. Set these aside and cut the body sides out, cementing the  $\frac{3}{16}$ " sq. stringers in place. Make the body formers a little oversize to take up any slack harder balsa may have on the bow of the body sides. Put the formers in the body and glue all joints.

Now back to the wing. Bend the landing gear from  $\frac{1}{8}$ " dia. wire and install them on  $\frac{1}{8}$ " plywood floors and glue them into the nacelles, along with the  $\frac{1}{8}$ " plywood firewalls. Cut the blocks for the nacelles from 1" and  $\frac{1}{2}$ " balsa, carve and sand them to their general shape. Hollow and fit them before gluing into position. Don't feel too badly if there are a few small gaps between the joints as this is very hard to make perfect. Fill the gaps with a good

filler such as dope and talcum powder.

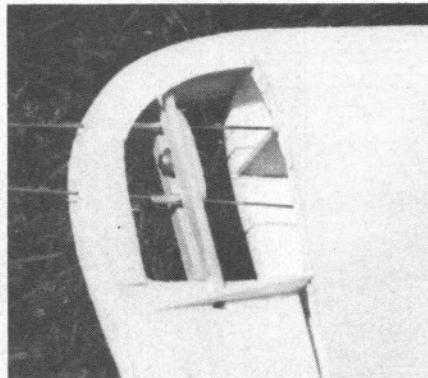
Next set the wing on its gear and block it up. Glue the fuselage onto the wing, making sure it is in alignment. If it isn't, the stab will be off and make the ship fly sort of funny. Just about forgot to tell you that the flaps should be on the wing with the control horn and pushrod installed. Well I never claimed to be bright did I? Slide a couple of pieces of aluminum tubing over the rear pushrod, then bend it to the correct shape and length. Solder it into position on the elevator control horn, making sure it is free moving. Slip the rod into the fuselage from the rear and solder it to the flap control horn. Align the flaps and pin them down so you can align the stab and elevators. Slide the stab back and forth until it is true and glue it. Use scrap balsa to brace the aluminum pushrod strengtheners into place. Bend and install the tailwheel assembly along with the bottom block.

Now is the time to finish building the turtle deck. Cut the top and bottom blocks for the nose section to shape and tack glue them on. Using the scrap 1",  $\frac{1}{2}$ " and  $\frac{1}{8}$ " of whatever you have, jig saw the nose block out. Carve it to its general shape and tack glue it on, then carve and sand the entire nose section to outline. Cut these pieces off and hollow them out and final glue them into place. Your fuselage should be finished with the exception of the rudder as it is the last thing to be glued on. This keeps it from getting busted during the rest of the construction.

Begin the cowlings by jiggling out two  $\frac{1}{16}$ " plywood rings just a hair larger than the firewalls. Also saw out two 1" balsa cowl rings. Gather all the scrap  $\frac{3}{8}$ " or  $\frac{1}{4}$ " balsa you have and cut each piece approximately 1" by  $\frac{1}{8}$ ". Lay the  $\frac{1}{16}$ " ply ring flat and glue these pieces vertically on the ring, overlapping each piece as you go. After the ring is completely encircled, glue the 1" balsa ring on top of them. Let these dry, then carve and sand them as round as you can. Take some  $\frac{1}{16}$ " balsa sheet, wet it, bend it around the cowls and glue into position. This is done in sections with the grain of the wood running forward on the cowls. After they have dried, they can be sanded and carved to the final shape. Fill any imperfections with putty. The cowls are mounted by drilling small holes around the inner cowl rings. Screw them into place with small metal screws. The rest is easy, all you have to do is build the wing tips along with the adjustable lead-out mechanism and cement them into place. Now glue that rudder on.

Use a little elbow grease and sand it all over. Fill any bad place with putty and prepare the ship for its finish. We used Sig dope to paint it, but the color was achieved by purchasing some aluminum powder from a decorator's store and mixing it with clear dope. It makes a much lighter finish. We only gained 8 ounces on the finish. The ship weighed 41 ounces with the tanks, setting on its wheels without engines, ready to finish. The engines are 15 ounces. The ship weighs 64 ounces now ready to fly.

If your modeling life has become boring, give the Jeep a chance to put the zing back in. It's definitely not a dull machine. Besides, look what you will be doing for the economy.



The lead-out spacing, it fine-trims the flight. Left: Why fight gravity? Easier to invert the plane to start the engines. Saves flooding up. Take your time, get good needle valve settings.