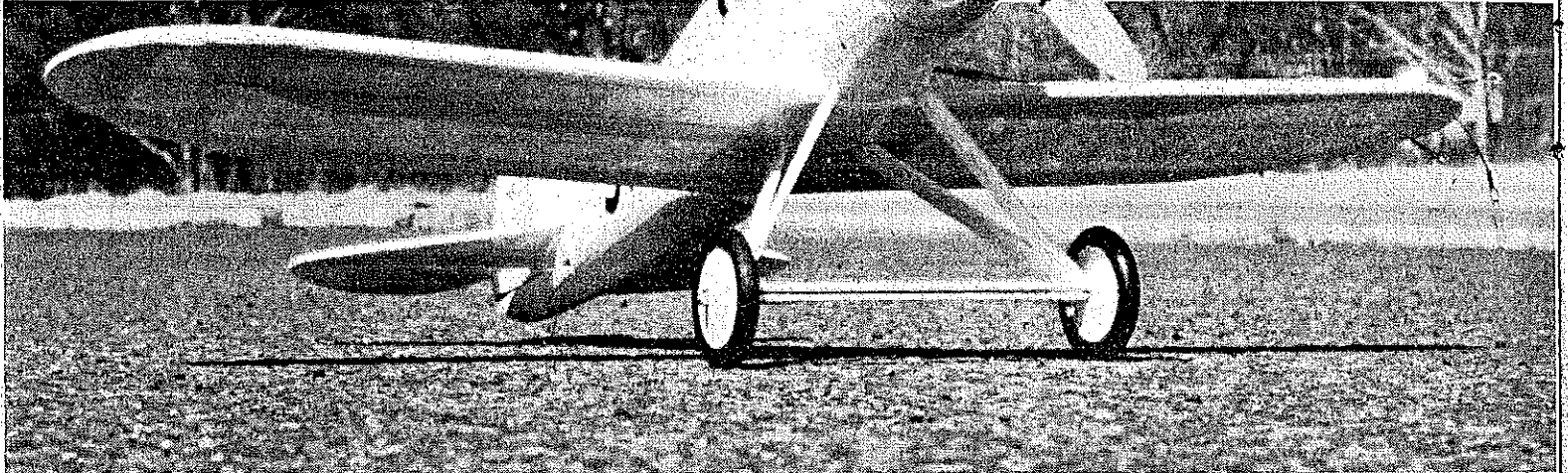


pete

These two classic poses of the author's version of Benny Howard's lovely design speak for themselves. Our only comment: Enjoy!



AIR racing has been with us nearly as long as powered flight. In 1909, Glenn Curtiss in the first official air race in France, The Bennett Coupe International, flew at a speed of 47.65 mph. Since an American won this first race, the following year and thereafter races started to be held in the United States. In the early years practically every race resulted in some kind of record that only lasted to the next race.

It was only after World War I that air racing became more serious with the creation of valuable trophies and honors to the winners. Some of these early races were: Schneider Trophy, Pulitzer Trophy and, later in 1929, the famous Cleveland National Air Race and Thompson Trophy Race.

One of the more famous racing planes in the 1930-era, was Ben Howard's "Pete" which I have modeled in U-Control. Pete had a wing span of 20.1 feet and a length of 17.65 feet. There was only a minimum of room for the pilot. Extra fuselage panels by the cockpit had to be opened before the pilot could enter the plane.

Fuselage: Cut crutch or backbone plate from 1/8 balsa sheet. The shape can be obtained from the top-view outlined by triangles. Cut top and bottom halves of formers from 1/8 balsa sheet and cement to backbone plate where indicated. Before cementing on former BL, cement on 1/8 plywood landing gear mounting plate with the 1/8"-dia. landing gear wire fastened to it.

The firewall is 1/4" plywood. Assemble engine mount and drill firewall for fuel pickup line and throttle wire. Mount 2-oz. fuel tank inside fuselage and then proceed with the 1/8 balsa planking strips. Sandpaper smooth and then cut out the cockpit and wing mounting shape. The tailskid is made from 1/16 music wire, thread-wrapped and cemented to a 1/8 plywood plate inserted into an area of the fuselage planking.

Before the Gee Bees came along, modelers of another day 'went bananas,' over Benny Howard's exquisite little racer. Our version of this Golden Age classic, is a .20/.30 powered control-liner with a 3-line system for realistic flying.

Mount the Throttle Flight Control Unit (Sturdi-Built Suspended Plane Unit) onto 1/8 plywood plate. Cement plate between formers BL and DL, spaced 1/4" below fuselage backbone (1/8 sq. balsa strips used as spacers). The elevators and throttles are actuated by 1/16" dia. music wire. By using a soldering coupler, I spliced in a Du-Bro RC Kwik Link in the elevator control wire so I would have some adjustment possibilities.

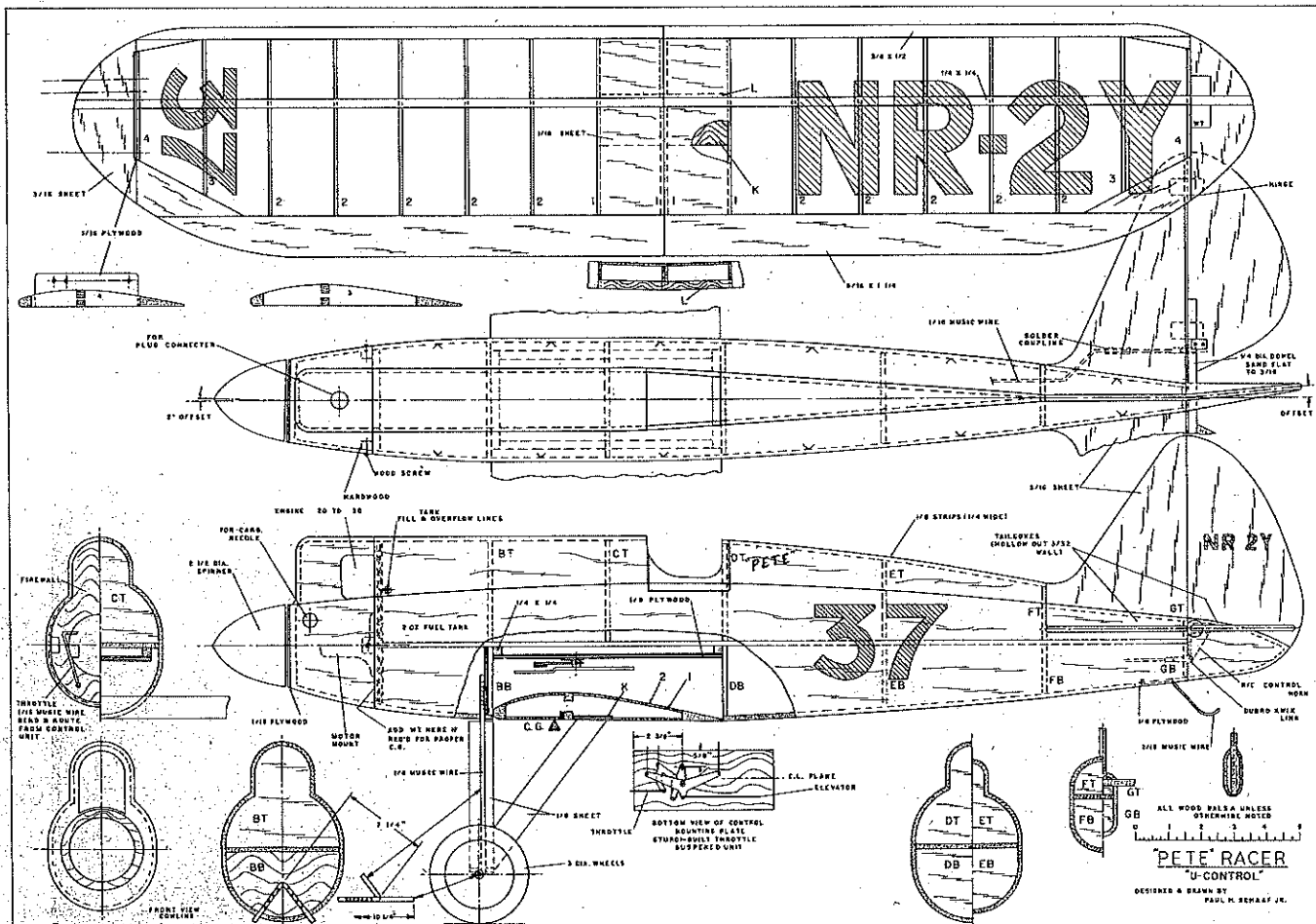
The leadout wires are fastened to the Control Unit and led out the side of the fuselage before the wing is assembled to the body. The engine fuel line goes through the firewall; however, the inlet and overflow lines can go out the side of the fuselage. All lines should be in place, including

the tank, before finishing the planking.

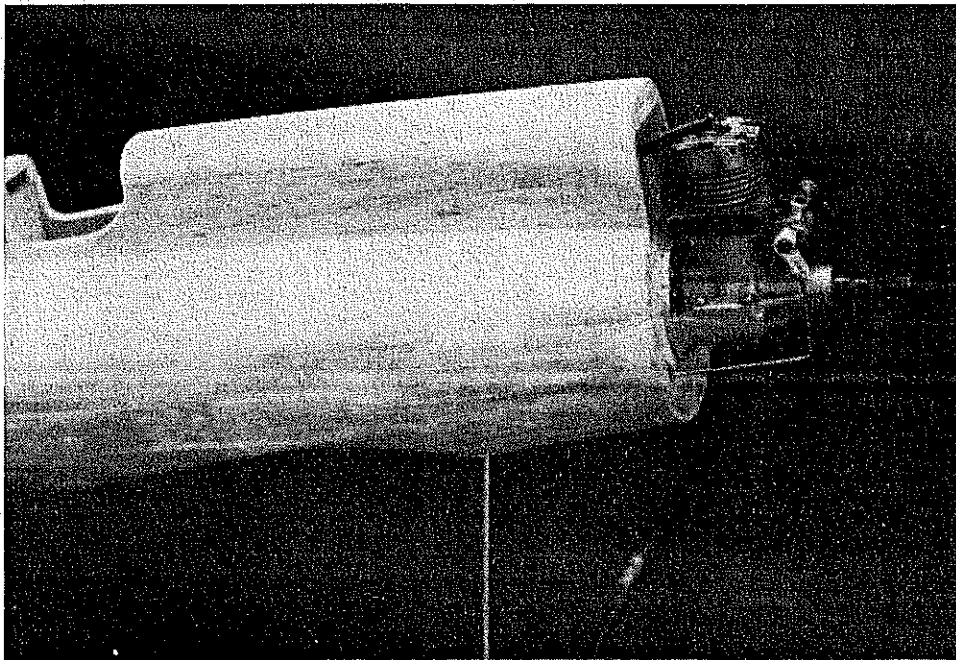
Cowling: The cowling is shaped from balsa blocks. Hollow out as required for your engine, being sure to leave maximum air space around your motor. Cut out in front, and sides, for cooling air flow. The cowling is mounted to the fuselage by screws entering two wood blocks (hardwood) cemented to the firewall. Note throttle wire coming from the throttle unit. This should move freely in the cowling. Coat insides with three or four coats of fuel-proof dope to protect it from the fuel.

Tail Surfaces: Cut from soft 3/16" balsa sheet, rounding edges as required. The elevator connector is a 1/4"-dia. dowel sanded flat and securely cemented to each half of the elevator. Use your favorite hinge for the stabilizer. I use figure-8 threading, however, there are many fine RC hinges you also can use. Most important, the elevators should move freely. The control horn is an RC nylon one. Obtain the longest one you can and mount the pushrod in the furthest hole from the mounting surface. Because of the elevator size we want a minimum of movement to start with on the first flights. Note the rudder 1/8 inch offset.

Landing Gear: The main gear is formed from 1/8"-dia. music wire as mentioned earlier. The front strut is sandwiched between 1/8 balsa sheet. The rear strut cements to the front strut and wing mounting plate on final assembly. The wheels are Williams Bros. 3"-dia. Vintage Style. A collar or soldered washer holds wheels on the axle. Please note, the wheel axle is actually a second section of 1/8"-dia. music wire that is wire wrapped and soldered to the landing gear wire coming down from the fuselage. A 1/8 sheet of



FULL SIZE PLANS AVAILABLE - SEE PAGE 128



The rough-planked fuselage with engine bolted to firewall, and linkage for the engine control.

balsa sits on top of this axle to complete the landing gear setup.

Wing: The ribs are cut from 3/32 balsa sheet. The leading edge and trailing edge are stock hobby shop shaped pieces of balsa. Spars are 1/4 sq. balsa. Pin the leading edge, trailing edge, lower spar, and center bottom 1/16 balsa sheeting over the plans and then cement the ribs into position. Add the upper spar and center top sheeting. Add the control-line leadout plate and the wing tips. My model had 1/2 in. dihedral under each wing tip, so the wing has to be made in two halves, fastened together in the center with the 1/8 plywood splice plates. Also, rib 1 should have a slight angle as illustrated. I added about 1 oz. of weight to the outboard wing tip before covering the wing with white Super Monokote. Later, when assembling to the fuselage, we'll remove

the Monokote that is in the cementing areas—as by the fuselage and rear landing gear mounting strut.

Finishing: Cement stabilizer and rudder to the fuselage. Add the shaped tail cone blocks. The fuselage is sanded smooth and all gaps filled in. I used "joint patch cement" from the local hardware store. After the fuselage and tail sections have their final smooth finish I put on three coats of fuel-proof clear dope, sanding lightly between each coat. Finish the cowling the same way. The landing gear struts are left until the complete assembly to the wing is finished. After the doping, and letting a day go by for drying, I put on two coats of white epoxy paint. White fuel-proof dope also is fine.

Assemble the motor and pushrods in the fuselage, making sure everything works smoothly. I

used a .30 O.S. RC engine. However, that is about the maximum size. A .20 or .25 engine should work out well. Of course, if you don't use throttle, a regular engine is sufficient.

The leadout wires are fastened to the throttle unit and pass through the fuselage just above the wing position. Cement the wing into position and lead the wires through the wing leadout plate. Finish cementing the landing gear struts into position. Paint as required.

I used a 2 1/2"-dia. white spinner. Lettering and numbers were cut from Monokote Trim Sheets. The word "PETE" was added by felt-tip pen. If you wish to add a pilot, I used a Williams Bros. 1"-scale one. You'll have to trim the shoulders and sit him on a balsa block inside the fuselage in order to get him to the correct height. It's worth it!

Flying: The model was flown using a Sturdi-Built 3-wire control handle with their three wire lines (52 ft.). The plane has a large fuselage compared to its wing span and has very little drag, so it'll move out quite rapidly. Using a throttle setup is a lot of fun, but it also gives you the opportunity of first getting used to the plane at a lower speed level. Be careful not to reduce the speed too much, especially when in a climb which will cause a stall and perhaps some rebuilding.

On the first flight after starting your engine, set motor to idling and, after your partner releases the plane, gradually increase the speed as the plane moves around the circle until that point where you have a positive pull on the handle and high enough speed to get the plane airborne. Don't zoom into the wild blue yonder, but just gradually give it up. Remember, you have large elevators, so be gentle on your movements. If all looks good then gradually increase speed more and do your thing.

To land retard throttle, keeping the nose level, or slightly down, so you don't stall out. Make all movements gentle until you get to know the plane. As you retard throttle more, the plane will lose speed and land. Give a little up as it gets close to the ground and flare it in. Then go to full idle.

U-Control is very enjoyable with a reasonable investment. Adding an extra feature like throttle control, combined with a Sport Scale model is about the ultimate.

