



PHOTOGRAPHY BOB HUNT

The Nicholas Beasley NB-8 was another of many light planes developed in hopes of weathering the economic state of the country during the Depression. The company located in Marshall, Missouri was a leading aeronautical supply house. They had developed a low winged two place plane which had not sold too well. The company searching for a trainer type model selected the homely little parasol which had been designed by Tom Kirkup. Making various improvements, it was put into production in October 1931. Some 57 were built and sold before the company sold the airplane division to Air Associates, Inc., during May of 1938. No beauty to look at, it made up for it's homeliness with flying personality and behavior. Because of her gentle nature the NB-8 was widely used as a primary trainer. With side by side seating, it offered a person the chance to "rubber-neck" around the sky without paying too much attention to their flying. For cold weather protection a detachable canopy was available. It was recommended by all who flew her. The first NB-8 was powered by a 36 h.p. Aeronca engine and then a 3 cylinder 45 h.p. Szekely, both proved to have too little power. The final version was powered by a 5 cylinder, 80 h.p., English "Genet" engine which gave it a cruising speed of 83 with a maximum speed of 110 mph. The price was \$1790 at the factory in 1931, and was lowered to \$1345 in late 1934. One feature the NB-8 possessed was folding wings. When the wings were folded, it's width was just 10 ft. 4 in. It appears that this was aimed at the owner who could keep the ship in his garage or yard, then tow it out to an air strip with his car.

Fuselage

Cut out 2 sides of $\frac{1}{8}$ " sheet balsa, plus the $\frac{1}{4}$ " ply fire wall and all cross pieces seen in the top view. The 2 side pieces get $\frac{3}{16}$ " \times $\frac{3}{32}$ " strips glued to the inside at the top and bottom. The sides are then scored lightly on the outside in two places to aid in allowing the

Nicholas Beasley

By Al Wolsky

This obscure lightplane from the 1930's makes for a fine flying R/C Sport Scaler.

sides to conform to the shape in the top view forward of the cockpit area. Do this carefully, then glue or epoxy in place the fire wall and cross pieces. Check for trueness as you progress. When everything has dried, the inside from the fire wall back to the cockpit section can be lined with $\frac{1}{16}$ " ply doublers to beef up the fuselage, while $\frac{3}{16}$ " ply is used in the bottom to mount the landing gear. Bend the cabane wing mounts to shape, these can be of $\frac{1}{8}$ " or $\frac{3}{32}$ " welding rod or coat hanger wire. Make these accurately as the wing incidence will depend on this. They are sewn with heavy cord or thin wire to 3 pieces of ply or hardwood that are cut to fit inside the fuse. Before gluing these pieces in place, make the cabane strut angle gage. When gluing the gage in location, it should be set on top edge of the fuselage side with the cabane strut against the gage's angled edge. The rear strut brace is wrapped with thin copper wire and soldered, also do this to the 2 wires that are at the top of the

assembly that the wing rests on. The formers are added with the nose planked with $\frac{1}{8}$ " balsa. The $\frac{3}{16}$ " square stringers are glued to the rear formers. Fill in around wing support wires where they enter fuselage with scrap balsa. The gear struts are bent to the shapes shown using $\frac{1}{8}$ " steel wire. They are held in place to fuselage with 4 gear plates and screws. The cowling mount is held to the fire wall with small self tapping screws. The cowl is made from the bottom of a 2 Liter plastic beverage bottle. Check out the various colors in your local food market. By cutting out the center and reducing it's depth, it makes a perfect cowl for this model. Three small screws hold it in place on the cowl mount.

Tail Surfaces

The tail surfaces can be built up of $\frac{3}{16}$ " pieces and sheet outlines or can be of solid $\frac{3}{16}$ " sheet balsa. Whatever type you decide on, use firm material.

Wing

Start the wing by cutting 2 spars of $\frac{1}{4}'' \times \frac{1}{2}''$ hardwood such as spruce or pine. These are cut to the pattern on the plan. Note that they taper to $\frac{3}{16}''$ from the last rib location to the end. Cut the two dihedral braces of $\frac{3}{32}''$ ply. Sandwich the spars between the two braces, with the spar center section on your work bench measure out at the last outboard rib location. At this point you should have 2 inches of dihedral at each spar. Cut the trailing edges from $\frac{1}{8}'' \times 1''$ hard sheet. The $\frac{3}{16}''$ tip pieces should also be hard balsa. The leading edge is a $\frac{3}{16}''$ dia. hardwood dowel. A visit to your local building supply center should give you a good selection of dowels. Look for two of the straightest you can find. Locate the spar in position on the plan, pin the trailing edge in place, glue the ribs in position, add the top trailing edge, the dowel leading edge and the top balsa spar and tip piece. Repeat the above for the left panel. (Either make a tracing or oil the plan with furniture oil to get the reverse panel. This will make the plan visible from the other side of the plan. The ribs at the center section are trimmed down $\frac{1}{16}''$ top and bottom to accept the sheeting used there as is the leading edge out to the last rib. Add the tip braces and wing strut mounts.

The wing struts can be made of hardwood or of hard balsa. Shape them to an airfoil, then glue them together over the plan. They are held to the wing by short pieces of soft wire that are epoxied into the end of each strut end. Holes drilled in the wing strut mounts accept the wires. At the fuselage end of the strut a plastic tube can be epoxied in location to hold the strut in place. The struts are for scale appearance only and serve no other purpose.

Covering


Depending on your choice whether it be plastic film or cloth type covering using dope, fill in nicks and dents with some type of filler. I usually use a spackling filler which is available at hardware stores. Sand smooth all frames to remove dried glue, also round off all edges to achieve an overall pleasing, smooth

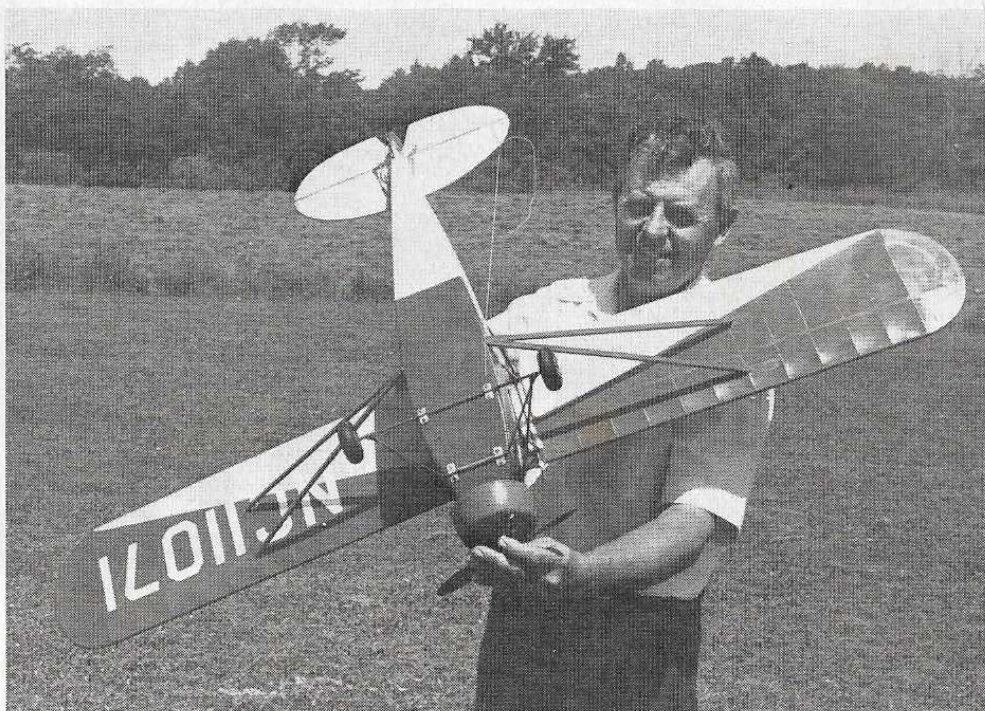
looking model. On my model, I used Silray and finished it with yellow and red Sig dope. The trimming is patterned after a photo of the real plane in Juptners Vol. 5, which shows the NB-8. Other pictures show one in a solid color. So, it appears fancy paint jobs were not the order of the day.

Flying

With all the equipment mounted, the model should balance out level or slightly nose down. A Cox .09 was used to power my model. Its size keeps it within the cowl for scale appearance. Using a 7/3 prop and hot fuel, this engine flies it at a realistic scale speed. A .15 engine's cylinder would protrude thru the

cowl, but the plane would fly much faster. Also, being heavier, the model might end up being slightly nose heavy. This is why the tail surfaces could be made of $\frac{3}{16}''$ sheet rather than being built up. When flying, use full power and keep it headed into the wind. As it climbs out, don't go into a steep climb or turn. Keep the air speed up by holding the model on a level flight path. Make any turns gentle. When setting up for a landing, keep the nose down to keep up air speed. Feed in up elevator as needed as you approach the ground and it should settle in.

All in all, she's an easy plane to fly and has no bad habits. I hope you have luck with yours. 



Author shows underside of prototype (above). Landing gear fabricated from music wire. Cowl for Nicholas Beasley comes from plastic soft drink bottle (below). Plane is typical of early light aircraft. It's cute.

