

DESIGNED BY JACK ARNOULD

I DECIDED to build the Citabria because I was looking for a scale plane that could be flown in the small field behind my house. The Citabria turned out to be excellent for this, being one of the most stable and predictable fliers I have ever built. In a ten to fifteen m.p.h. wind the Citabria will climb almost straight up like a helicopter and land again near your feet. Still air flights of around a minute are common. Sorry to say I do not own the field in question, a new school is scheduled to be built there in a few years, so there goes another flying site. Meanwhile . . .

The overall construction is quite simple for anyone who has previously built similar models, but I will outline certain items peculiar to this model.

FUSELAGE

First cut the top longerons from $\frac{1}{16}$ sheet, note each side is made from two pieces, so that maximum strength is gained from

grain direction. Build two fuselage sides and instal the $\frac{1}{16}$ sq. diagonal braces before gluing the $\frac{3}{32}$ sq. and $\frac{1}{16}$ sq. longerons in place. These run along the outside of the fuselage, so don't forget at this point to glue these longerons to make a left and a right fuselage side.

When both sides are dry, instal formers F-1, F-3, F-4 and cement tail posts together, making sure everything is true while drying. Next attach remaining formers and carve the nose block from medium hard balsa.

The undercart is made from two pieces of wire, 16SWG for the main legs, and 22SWG for the spreader bar. Although there is little give in this system, the model light enough to survive landings without damage in over two years of flying.

WING AND TAIL SURFACES

The wings and tail are quite straightforward in construction and need no special instructions. These surfaces along with the fuselage should be covered in lightweight tissue before assembling the model. The original was covered in white with a red tissue sun-ray pattern doped on. You have a choice of a multitude of colour schemes for the Citabria which can be seen in many of the flying magazines. Keep it light however, coloured dopes are not re-

commended for this model, but if you must use coloured dopes at least spray them on.

PROPELLER

The prop is carved from hard balsa, or preferably American white wood or sugar pine. With all the effort required to carve, finish, and balance a prop the added durability of hardwood is well worth the slightly harder carving. I always use hardwood and the prop will usually outlast the model.

The model is powered with 8 strands of $\frac{3}{16}$ " x 12", which gives a steep climb from a hand-launch to about 30 feet altitude, then a more gradual climb until the power runs out. Different motor combinations will give a variety of flight patterns depending on your requirements and those of the flying site.

FLYING

If the flying surfaces are warp-free, and the model correctly balanced, a straight fairly fast glide should result from a hand-launch. Then wind on approximately 50 turns, launch and observe the flight pattern. Make corrections by adding down-thrust or side-thrust as required in small increments while slowly increasing the number of turns wound on the motor. Exercise patience here, and avoid the temptation to wind on full turns and let her go to see what she can do. Nurse the model through its initial flight testing, which is the most dangerous time in any model's life and be assured of many hours of enjoyable flying from your Citabria.

