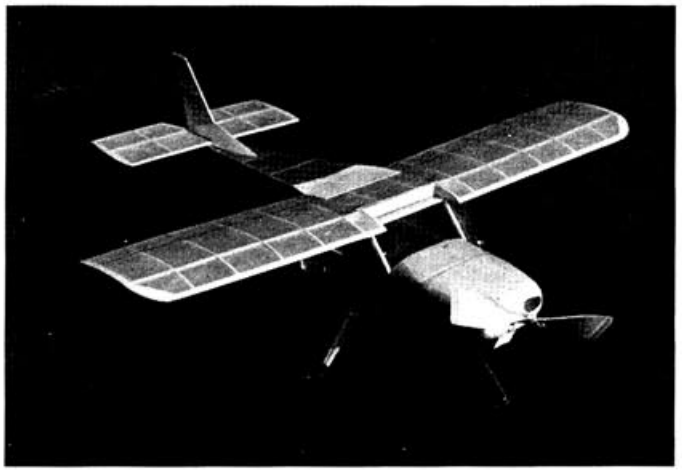
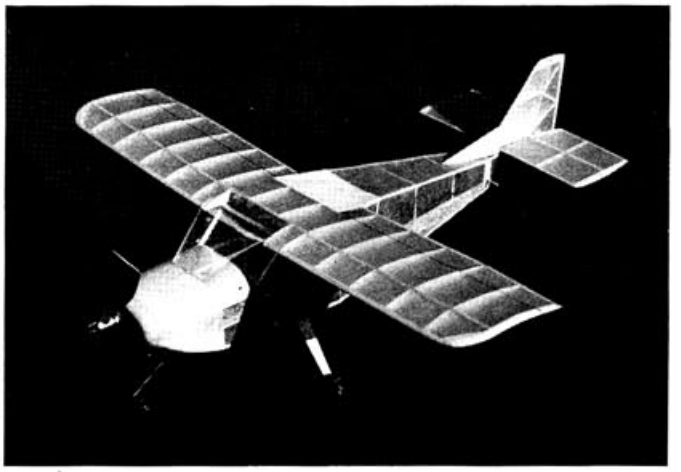




PEANUT SCALE

POTTIER P 100 TS

By WALT MOONEY . . . This French homebuilt design has excellent attributes for a fine performing Peanut model. The one drawback, a trike gear that limits propeller size, can be overcome. Walt explains.

• A short time ago, Alain Parmentier of Montreuil, France, sent a three view of the Pottier P 100 TS to Bill Hannan. Bill sent me a copy and that was all the urging needed for this model. It has all the attributes of an excellent Peanut design with one exception, the tricycle landing gear tends to limit the size of the propeller. Of course, if the contests you attend allow hand launching, and many do, then a large propeller and short landing gear presents no problem at all.

Another approach that has worked well for people, is to make the model very clean and light so that a small diameter prop is capable of providing satisfactory flight times with a relatively low powered rubber motor. This model was designed using this approach and has been very satisfying.

To keep the model as lightweight as possible, make sure that all sheet wood selected is as light as possible. This is especially true in the case of the block balsa used to shape the nose and for the optional wheel pants. The original airplane was flown without either wheel pants or spinner, so that is the way the model in the photos was depicted. A non-existent part is the lightest one available! Black tissue was used to depict the side windows and this is generally much lighter than clear plastic. Balsa wheels rather than hardwood or plastic are also a must.

Why does this model have a plastic propeller with all this emphasis on light weight? Well, it shouldn't, and if you do a better job at weight control than I did, especially at the back end, you can carve a light balsa propeller and still have the model balance correctly.

Two changes are made on the plan from the way the model was built as construction improvements. First, an aft rib was added at each side of the fuselage where the wing dihedral break occurs. I tried to do without it, but it's not as structurally sound without it. A bond paper fairing was used to fair the top of the wing into the fuselage but two little balsa triangles at the longeron and all tissue covering will look better.

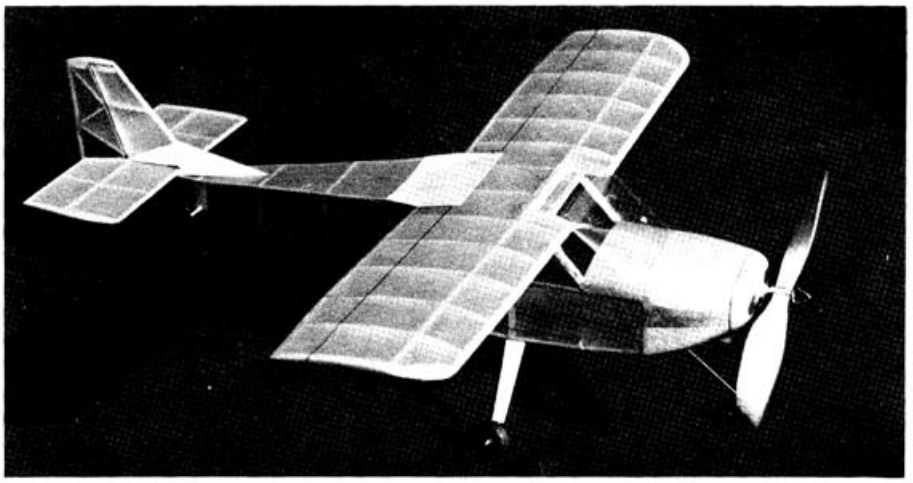
The model should balance just forward of the main wheels.

Fairly standard building techniques are used for this model so a comprehensive instruction article is not required, however, some specific points will be noted.

For instance, the nose plug, which is cemented on the back of the nose block is shown one-quarter of an inch thick. Over the years there have been literally hundreds of models built with plugs of lesser thickness. Thrust adjustments are limited to the thickness of the plug or less. Therefore if you use 1/16th sheet for a plug and you find you need that much downthrust, you will also find that when the motor runs down, the nose block and propeller will fall out of the nose.

The fin on the Pottier is quite thick, and highly tapered. Cut the vertical tail spar out first and then make the ribs out of sheet to the proper width at the place where they attach. The leading and trailing edges of the vertical tail then have to be centered on the ribs so that they line up with the centerline of the spar, as shown on the pattern. Note that the root ribs must be shaped to allow the horizontal tail to slip through. When this assembly has dried completely, it should be sanded to the airfoil sections shown. The dorsal fairing is made of bond paper and is fitted by the cut and try method after the model is covered and assembled.

The main wing ribs are all cut from 1/32nd sheet balsa to the shape shown on the side view of the fuselage. The tip shape is shown just to the right of the wing. Note that the tip of the wing has considerable washout. The rib nearest



This little bull-nosed ship has a long fuselage that permits an extended motor run. Trike gear prohibits use of large prop. Promote hand launch!

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the tip is shortened for the wing taper and its lower side is tapered up to match the trailing edge thickness.

To achieve the horizontal tail airfoil, the tail is first assembled as a flat surface directly over the plan. After it is dry, remove it from the plan and add soft balsa strips directly over all the members except the leading and trailing edges and the spar. A short piece will have to be added at the center of the spar on top and bottom to allow a good airfoil to be developed near the tail cutout for rudder clearance. Cut two pieces of 1/8th soft balsa to the airfoil shape and use them for tail tips. Now, using a large sanding block, sand the horizontal tail to the proper airfoil. The tips have a half-round cross-section.

A piece of aluminum tubing is shown for the propeller shaft bearing and for the rear motor peg. Other suitable materials can be used, and in fact a Peck Polymers nylon thrust bearing was used on the model for a shaft bearing.

If desired, wheel pants can be made out of soft balsa laminations to the shape shown on the plan.

A windshield pattern is provided. It exactly matches the windshield on the model in the photos but since models built from plans may vary a bit use it as a guide for exactly sizing your own.

The model is covered with yellow tissue. It has a wide blue stripe on the fuselage with a thin white stripe above and below. The upper white stripe is located just on the fuselage centerline and is 1/16 wide. The blue stripe is 3/8 wide and just below, but touching the white stripe. The lower white stripe is just below, but touching, the blue stripe. Registration letters, in blue, 1/2 inch tall, "F-WYJC" are located on the aft fuselage sides just above the stripes. Unfortunately, the real color scheme does not photograph very well. It does look good to the naked eye, however.

The Pottier model flies quite nicely. The vertical tail being as thick as it is very resistant to warp adjustments for turn. A thin plastic drag flap, 1/4 wide by 1-1/4 inch long added under the left wing trailing edge was used to obtain the turn necessary to fly the model in an indoor gym. This won't be necessary for outdoor flying.

Have fun with your French "Cacahuete." •