



JOE LACEY never realised what an aeromodeller's aircraft he was building when he made his M.10 in the middle '60s. Nice simple lines, large tailplane, simple construction, in fact a 'beginner's scale model' some people have called it. Other people have named it an 'Ajax', but whatever it's called it flies superbly (yes, even though there's no dihedral) and I have yet to see a *Lacey* that does *not* fly superbly.

The model as drawn is full scale, including construction, and consequently it scores high static marks under the present Peanut Rules, and this coupled with its flying ability makes the *Lacey* a hard aeroplane to beat.

Construction is simple, but as with all small scale flying models, lightness coupled to strength is the key factor for ultimate performance. Select wood which is light yet strong; there is still plenty available in model shops, but careful selection is necessary to avoid an overweight model.

The *Lacey's* finished weight should be under  $\frac{1}{2}$  ounce, and with the suggested rubber and propeller sizes a model capable of very long flights will result.

Begin building the fuselage by making two sides, one on top of the other. When dry, separate and form a box section by adding the cross braces. Add the  $\frac{3}{32}$ -in. x  $\frac{1}{8}$ -in. sheet nose section together with the  $\frac{1}{32}$ -in. ply nose former. Next cement in the

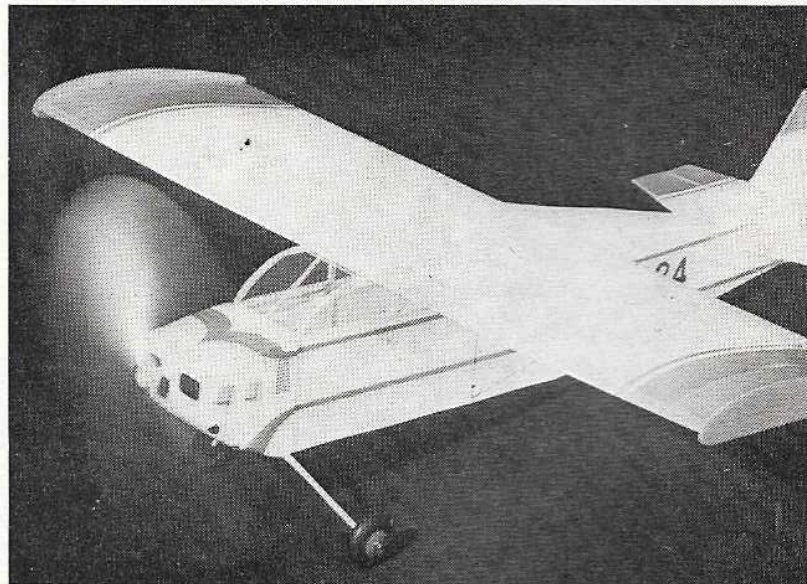
**How's that for a functional model? The Lacey M.10 features a huge, flat wing with no curve in sight - likewise the fuselage has a simple box cross-section.**

undercarriage cross brace mounting (hard  $\frac{1}{4}$ -in. x  $\frac{1}{16}$ -in.) and epoxy the U/C wire in position. The tailwheel and cabin support struts ( $\frac{1}{16}$ -in. dia. balsa) can now be added.

Tailplane and fin are built over the plan using  $\frac{1}{20}$ -in. sq. balsa or light  $\frac{1}{16}$ -sq. in. gently sanded. The hinges are cut from thin aluminium or beer can tops, these are pointed and pressed into the tailplane and very lightly epoxied. After covering, the elevators are then pressed onto the epoxied points of the hinges. The fin is built in exactly the same way but do not forget to add the little gussets - as well as adding strength, these help to keep warps to a minimum.

# LACEY M.10 and WITTMAN TAILWIND

a pair of contest winning  
Peanut scale models by  
BUTCH HADLAND



The wing is then built over the plan after first slicing off the top cambered section (using a template) ribs from sanded, soft, quarter grain balsa so that the eventual top ribs are approximately  $\frac{1}{20}$ -in. square. This method of construction gives a very good strength to weight ratio and is extremely stiff when covered. Add the strip ailerons and end plates after covering.

Next carve the noseblock and insert the nylon thrust button. Carve out the dummy air intakes (shown dotted) and also exhaust holes. The covering and finishing of Peanuts is very important because this is where

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most of the weight comes from on a model of this size. My system gives a nice realistic finish without adding too much weight.

Sand all the airframe lightly to remove most of the balsa 'fur', then give the whole framework one coat of dope (mix in 50 per cent thinners). When dry, once again sand very lightly to remove 'fur'.

Cover with Japanese lightweight tissue (available once again, thank goodness) using clear dope straight from the tin as an adhesive - remember to put the tissue 'grain' along the long lengths of the airframe, otherwise sags and warps will appear. When thoroughly dry, steam or lightly water-shrink all the surfaces: the fuselage can be left to dry anywhere, but the wings, tailplane and fin should be placed on strips of  $\frac{1}{8}$  in. x  $\frac{1}{8}$  in. balsa placed crossways on your building board, then lightly weight the flying surfaces on to the  $\frac{1}{8}$  in. x  $\frac{1}{8}$  in. strips until perfectly dry - at least overnight. The whole model can then be coated with one layer of 30 per cent dope/70 per cent thinners and allowed to dry, again overnight if possible. The model is white with red trim so you must decide which finishing method to adopt.

If you have access to an airbrush, then a very light 'flash over' coat of white can be applied, this improves the finish considerably and of course in competitions, attains higher marks. The mix for this 'flash over' coat is as follows: 10 per cent white dope, 10 per cent clear dope and 80 per cent thinners. The red trim can now be applied, again with the airbrush - I

use a 50/50 mix of dope and thinners for trim work. It is important to use a 'low tack' masking tape when masking up tissue otherwise when de-masking, tissue damage will occur.

If you do not have an airbrush available, then give the model one more coat of the 30/70 mix and apply the red trim, which will have to be cut from red tissue.

Before assembling the model, apply the black registration letters and line in the doors etc with Indian ink. Assemble the tailplane to the fuselage, and then the fin and wing ensuring that everything is 'square' when viewed from the front. The wing and tail incidence is automatic when assembling to the fuselage. Install the noseblock, propeller and wheels etc and the model should balance slightly nose down when balanced at 50 per cent chord.

Test flying should be carried out over your favourite piece of long grass and all testing is carried out 'power on'. Wind about 250 turns on and launch straight and level - the model should go straight and land approximately 50 feet in front of you. If the model dives, then bend up the elevators slightly. If the model stalls then add a little Plasticine to the nose block until a straight descent is obtained.

Increase the winds gradually until the maximum of 2000 is reached - a slight piece of downthrust may be needed under full turns. Do not fly these models outside unless the weather is very calm, a 13in. model 100 yards away looks very small and can easily be lost . . .

### Wittman Tailwind

WHEN STEVE WITTMAN designs and builds an aeroplane, it is usually very efficient and *always* attractive. The *Tailwind* is no exception. I have been told many times that N64 RH is the prettiest Peanut that has ever been seen and I think you will agree when you have built your own!

Unfortunately the Peanut Rules as they stand 'penalise' the *Tailwind* because it is almost impossible to re-create the stressed skin effect of the real aeroplane, however it flies well enough to overcome the scale shortcomings - it finished in third place behind the *Lacey* at the 1975 American Nationals at Lake Charles with regular flights of 70 seconds.

Construction details are almost identical to the *Lacey's* so only differences will be explained.

The fuselage is made in the normal way, except that the noseblock should be carved and 'tacked' to the nose former *before* the nose section is planked. This ensures a nice continuation of the sleek lines. Remove the noseblock when planking is completed. The flying surfaces are built in the normal way but ensure that all the gussets are inserted and make sure that the  $\frac{1}{16}$  in. washout is in *both* tips; this is *most* important. The wing struts 'work' so ensure that these are cemented firmly to the wing and fuselage.

Covering is straightforward but don't forget to put all trim and identifying marks on to the model before assembly - it is much easier this way.

Correct assembly of N64 RH is most important; ensure that the fin is fitted absolutely central and that  $\frac{1}{16}$  in. downthrust is incorporated into the noseblock. No sidethrust was needed on the original, and a straight climb is followed by a right hand circling glide.

The navigation lights are carved from translucent toothbrush handles and look very effective. Wheels and propellers from *Sleek Streeks* are utilised; these are both light in weight and reasonably efficient.

Lubricate the rubber motor well, this will not only give long life to the rubber but will also minimise knotting and bunching, which invariably means a shifting centre of gravity, with its associated stalls and dives.

The contest record of these two models includes wins in the American Nationals, British Nationals, New Zealand Nationals, RAF Championships and numerous rallies and fly-ins so go to it - build a Peanut and have some real fun.