

Pelago

by
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A really smooth sport job for the Sunday flier, this easy-to-build, easy-to-fly funster is for .49 — .61 power

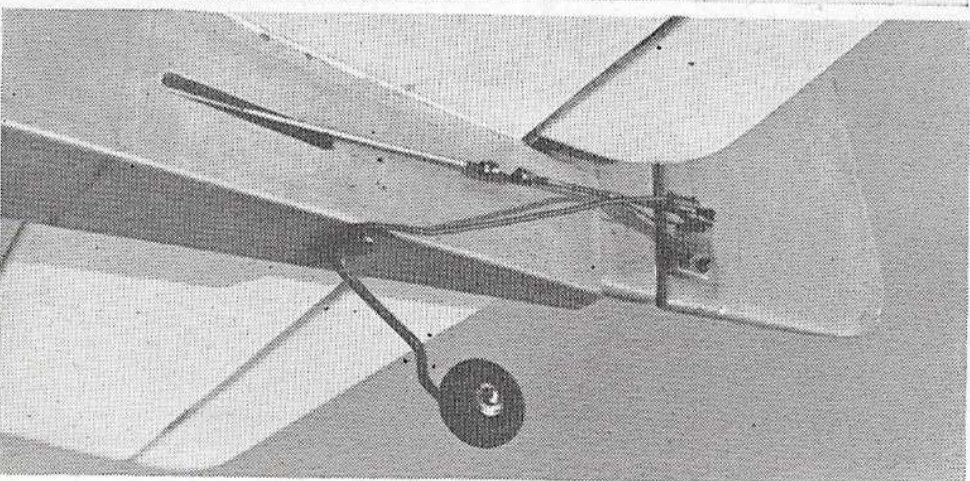
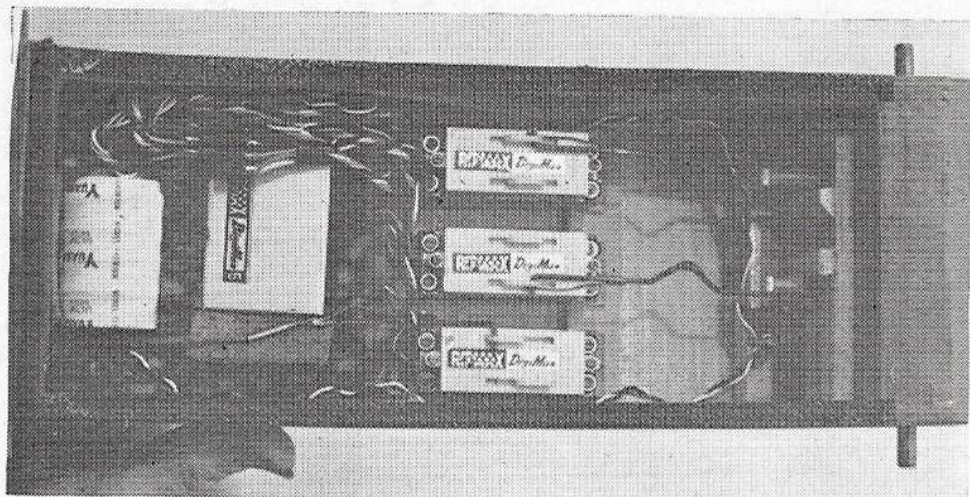


BEING primarily concerned with scale models, when it comes to the allocation of workshop time a general-purpose practice model for me has to be a complete contrast—economical, simple and quick to build. *Pelago* answered these needs for me, with the added bonus, it turned out, of being very easy and smooth to fly. It is docile enough to be used as a trainer yet,

with a .61 up front and the taps open, it will provide very pleasurable flying for any experienced pilot, with its smooth responsiveness.

If, therefore, you want to get something airborne with the minimum of fuss and bother—but still not end up with something that looks as though it were made of railway sleepers—then *Pelago* is the





Top: ample room in the fuselage for any equipment, as the space left round the Futaba servos shows. The linkage from the rudder to the steerable tailwheel is shown above. Well worth the slight effort involved for the precise ground handling resulting.

model for you. Don't be deceived by the open framework of the rear fuselage—the model is tough and rugged (though nylon rather than "instant" film covering is recommended) and will serve you well through all weathers and many gallons of fuel!

CONSTRUCTION

Fuselage

Build one side on the plan, in the normal way, and then build the second side on top of the first

to ensure that both are identical. Remove the finished sides from the plan and separate them with a thin knife or razor-blade.

Cut out the $\frac{1}{8}$ in. ply doublers and drill the holes for the wing-fixing dowels. Glue the doublers on to the outside of the framework sides. Next make the ply bulkheads, and fix the anchor nuts to the engine bulkhead to suit the metal engine mount you are using. Assemble the fuselage sides together by gluing in the bulkheads and securing with

three panel pins, through the doublers into the engine bulkhead, on each side. Now pull the rear fuselage sides together and glue and clamp together while drying. The remaining spacers and formers may now be fitted, not forgetting the $\frac{1}{16}$ in. balsa fillets that bring the longerons up to the same level as the ply side doublers.

The completed fuselage is covered with nylon and clear-doped before fixing the tail assembly and cockpit canopy.

Tail unit

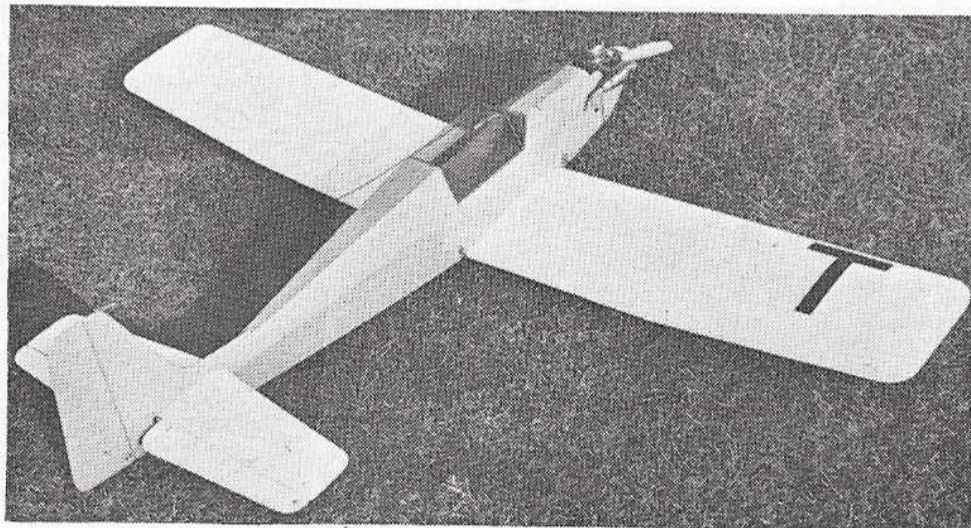
The tailplane and elevator are built first, and glued to the fuselage in the appropriate position. Then the fin and small strake are glued on, with small scrap balsa fillets to blend into the fuselage. Both tailplane and fin are built up, sheeted with balsa, and then covered with tissue. This type of construction reduces the tendency for the surfaces to warp, but they may be nylon covered if preferred. Elevator and rudder are solid balsa, again covered with tissue—do *not* use nylon here as then they would undoubtedly warp when doped.

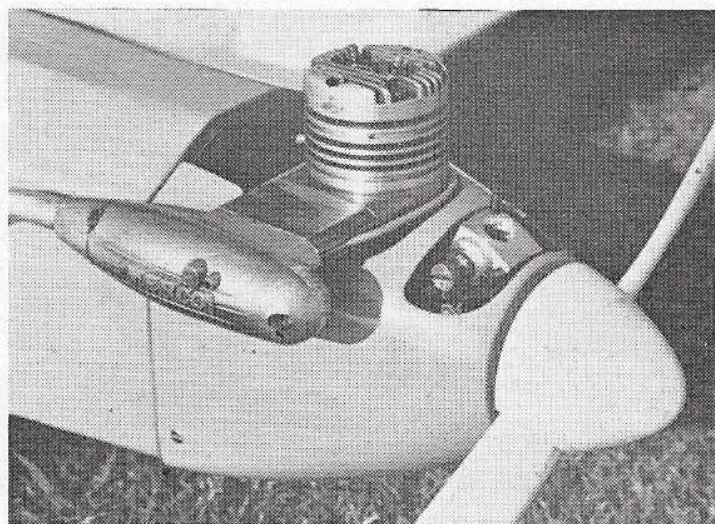
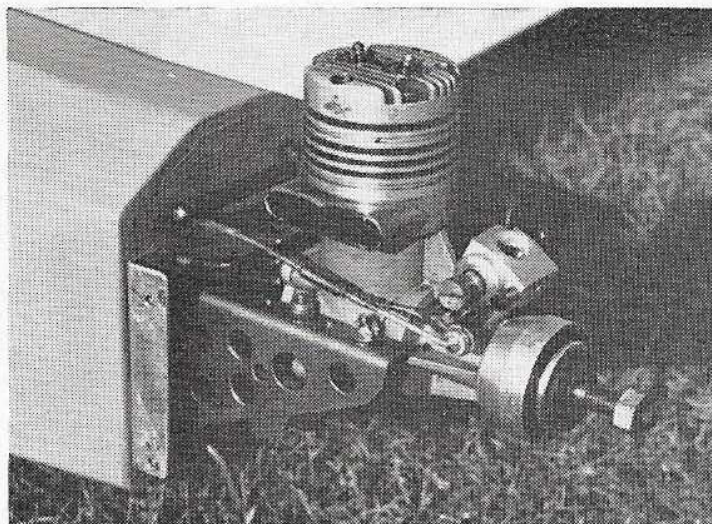
Wings

First make the rib template from plywood or aluminium, and then make the required number of wing ribs. Be sure to cut the holes for the aileron pushrods in *all* the ribs. You will see the reason for this shortly.

Build the wing in two halves and join them together with hard balsa dihedral keys, before any sheeting is commenced. Also fix the undercarriage blocks at this point, but do not fit the tip blocks yet. When sheeting the wing, do one half at a time, making sure that the half on which you are working is dead flat. (There is no wash-out to allow for, just build the wing on a good flat surface!) When the sheet covering is completed, make the aileron push-rods as required, and pass them through the holes in the ribs, from the tip end to the position required. (This is why I emphasised that the holes should be cut in *all* the ribs.) When satisfied that the aileron linkage is correct, the wing-tip blocks may be added.

The ailerons are built up, sheeted with balsa, and covered with tissue, in the same manner as the tailplane, to obviate warping. The rest of the wing is best covered in nylon (wet or dry—whichever way you find suits you) and clear doped.





Rigging and trimming

The c.g. position (you should balance the model *without* fuel) is not critical and may safely vary between the points shown on the plan.

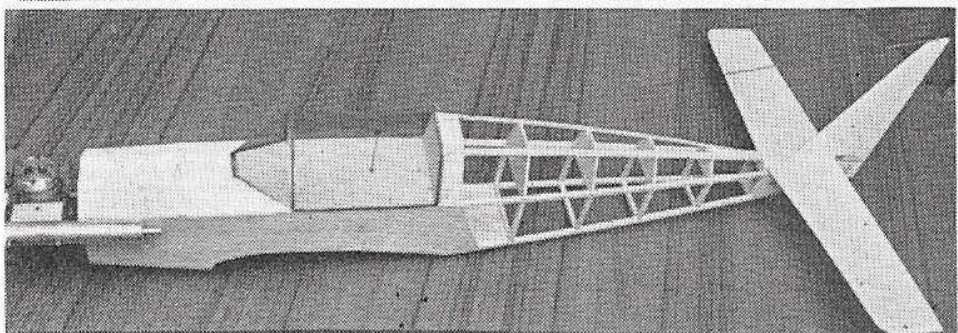
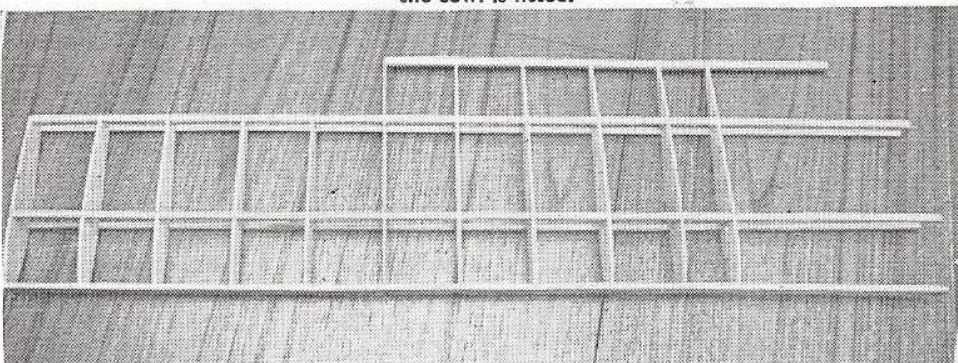
All flying surfaces are set at zero incidence.

There is no sidethrust or down-thrust shown on the plan but, should the model tend to pull to the left under full power, a packing strip may be fixed between the engine mount and the bulkhead (port side) to give up to 2 deg. of right offset to the engine thrust-line. It is advisable to test-fly *Pelago* before fitting the engine cowl, as these adjustments will then be much easier to make—and you can then make your cowl to fit nicely knowing you won't have to make any further alterations. (You can either build up a cowl from scrap wood, or carve one, as I did, and make a mould for a fibreglass cowling.)

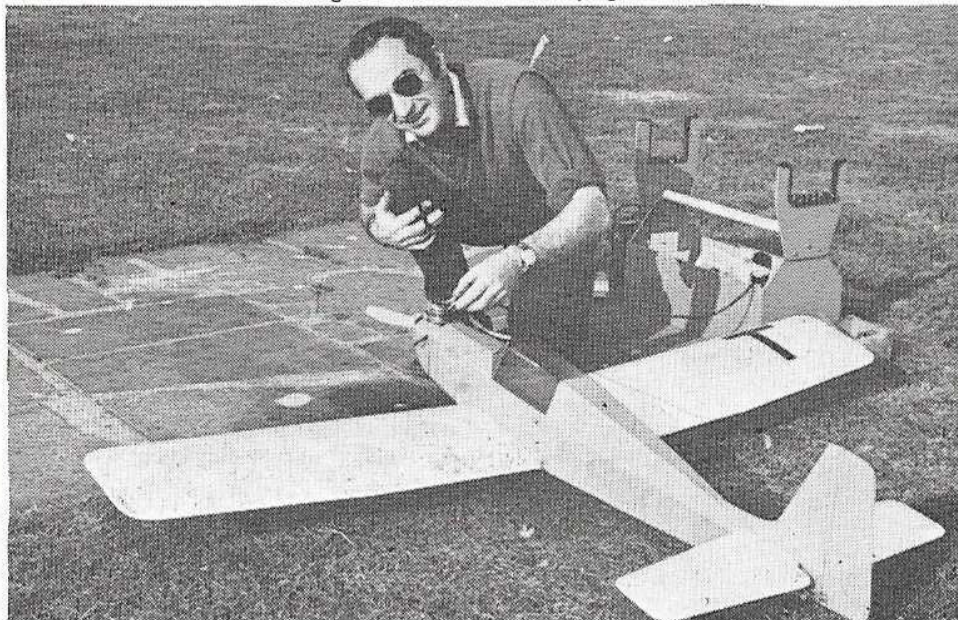
As you will see, from the photograph and the plan detail, my prototype has a steering tailwheel, connected to the rudder externally by means of a push-rod and tiller-arm. If you have never used a steering tailwheel before, then try it this time—it makes a world of difference to the ground-handling characteristics of your model. It is quite simple to arrange as shown but, if preferred, you could always use one of the tiller-arms available commercially for steerable nose-wheel units, which will lock on to the tailwheel leg by means of a grub-screw.

As this model is likely (I hope!) to be built by many people as their first low-wing machine, and possibly as their first aileron model (i.e. using ailerons as the *prime* control, with elevator, and leaving rudder just for take-off—and spins

The designer used the home-made metal mounts shown left, but commercial types can be substituted as shown on the plan. Right: there is a vast "cleaning up" of the appearance when the cowl is fitted.



Lightweight open frame construction as shown in the above photos is no sign of weakness! A properly designed structure such as this one, is as strong as the typical "all sheet" effort, but lighter and far more satisfying to build.





and stall-turns) perhaps a word or two about using that left hand for rudder steering during take-off will be in order. . . .

The main thing is, basically, not to *over-steer*. Having been used to steering with your right hand, on a rudder/elevator model, both on the ground and in the air, you must remember that you now have to steer the model with the rudder while it is moving along on the ground, but—immediately the machine comes unstuck, you must forget about the rudder and go back to that right-hand stick for directional control, using the ailerons to bank the model, and the elevator to pull it round and keep the nose up.

This being so, your left hand will not be quite so sensitive, being relatively “untrained,” as it were, and you may quite possibly find that you are over-steering quite wildly, for the first few take-offs. Remember that only the slightest

squeeze is necessary, and then only if the model begins to veer off the straight-and-narrow.

Otherwise, just let her have her head, gather speed and pull in just a small amount of up-elevator to ease her off the deck. Try and make any rudder corrections very smoothly. Any jerkiness with that untrained left hand can cause quite a swing and then you will over-correct this—resulting in a more pronounced swing in the same direction as before! When you get the hang of it, though, after a few flights, you’ll find you can make beautifully straight take-offs.

And, of course, taxiing is very satisfying. You can start up, taxi out to the downwind end of the strip, rev. up and take-off—and, after you land again, to taxi back right to your “pitch” gives you that “everything completely under control” feeling more than anything else I know!

Coming in for a satisfying two-wheel touchdown—better than a trike any day!

