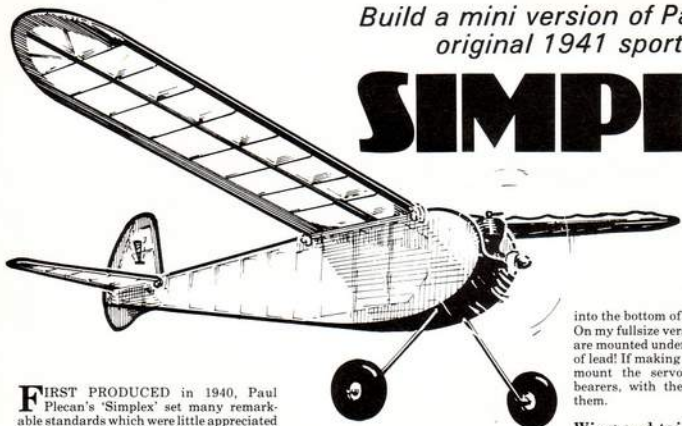


Build a mini version of Paul Plecan's original 1941 sports flier

# SIMPLEX

40in. version  
for Mills .75  
redrawn and  
built by  
Douglas  
Tennant



**F**IRST PRODUCED in 1940, Paul Plecan's 'Simplex' set many remarkable standards which were little appreciated at the time. Published in *Air Trails* of September '41, the original 5ft. model appeared to British eyes as a skimpy, unrealistic typically American lightweight box car, but it was far from being that. For a start, Paul built the original for an equivalent cost in materials of 50p or \$2.50 — in those good old days when the pound was the equivalent of five dollars — add a seven dollar engine and \$1.25 timer and you had a complete 'gas job' ready to fly in an interval of just over 2!

Paul used a 'Sky Chief' on his prototype, added the pull out battery tray arrangement with knock off motor mount bulkhead and by his eleventh flight he had the first out of sight of 33 mins. from a 15 sec. engine run.

In times of stringency, when Brits were banned from flying power models and more used to bulkier, heavier cabin designs, 'Simplex' came as a breath of fresh air and there must have been hundreds of expatriate aeromodellers from the old country displaced through the Commonwealth Air Training Scheme to Canada, Rhodesia, South Africa and the USA who cut their teeth on 'Bantam' and O&R powered 'Simplexii'. They all found that Paul's model was just the job to tuck under the barrack room bed between sessions of air training. So it is no wonder that 'Simplex' should re-emerge in fond reminiscence among the membership of SAM. Douglas Tennant has a clutch of them including this 40in. version for the Mills .75 diesel and at only 11oz all up it is naturally a spritely performer. Over to Douglas for his description.

## Simplex 40

My son Angus built a real 'Simplex', 60in. span, for two channel radio, powered by an ED 'Competition Special'. Nylon covered, at 2½lb. it proved an excellent, leisurely trainer. It is now fitted with three channels and an Eryx 19 and has gained some ½lb in weight.

Construction, as the name implies, is very straightforward and with its nylon covering it will bounce off most things.

Very little needs to be said about construction but the following points may be useful.

## Fuselage

The engine is mounted on a ¼in. paxolin plate (aluminium would do just as well). This permits easy engine and thrust line changes. Alternatively the engine bearers may be fitted to suit the width of the chosen engine. The undercarriage is fastened to the ply firewall with home made J bolts, those very useful and no longer obtainable devices. These are made very easily by bending SBA bolts with round nosed pliers, then cutting off the bolt heads. When tightened, the sharp cut off will press firmly into the ply. Do not overtighten, or they will straighten themselves again! The balance (centre of gravity) position is important. Use heavy wheels or epoxy lead

into the bottom of the engine compartment. On my fullsize version, the receiver Ni-Cads are mounted under the engine as well as 2oz of lead! If making the radio control version, mount the servos well forward on the bearers, with the lighter receiver behind them.

## Wing and tailplane

Cut wing ribs from hard sheet and slot them ¼in. into the trailing edge. Keep tailplane assembly as light as possible. It is a little warp prone, but warps are easily removed over an electric ring or a steaming kettle.

## Covering and flying

Mine is nylon covered and fairly indestructible. Modern plastic film may be used. If using tissue, it would probably be wise to fill the first bay in the fuselage with ¼in. sheet balsa.

Free flight trim is left/left. The trim tab is very sensitive, particularly if the balance point is too far back. The looks of the model are much improved by a SAM sticker.

*Displaying all the simplicity of the original, Douglas Tennant's 40in. Simplex, adorned as suggested with it's SAM sticker! (also we're pleased to see ... the emblem of the SMAE!)*

