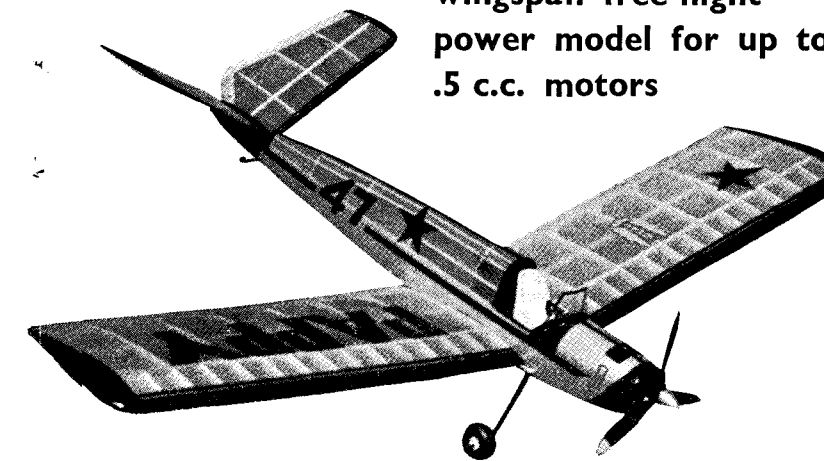


PAPPY by COLIN READ,

FULL SIZE PLANS to build this 31 in. wingspan free-flight power model for up to .5 c.c. motors



former should also be given two coats of fuel proofer. The completed fuselage can now be sanded very carefully to a smooth finish and the wing and tail retaining dowels added. Details such as windscreen, pilot's seat/pilot, etc., are best added when the fuselage has been covered and doped.

You will notice that both the wing halves are drawn superimposed on the plan, the port wing being shown dotted. All ribs and riblets (with the exception of the root rib, are $\frac{1}{16}$ in. sheet. Note that the rib slots in the hard $\frac{3}{8} \times \frac{1}{8}$ in. main spar, should be cut very carefully, to ensure each rib is aligned correctly.

To build the wing, pin down the leading and trailing edges and main spar and add the ribs and riblets (do not cement the root ribs in position at this stage), also the soft block tip should not be fitted until the wing has been completed. When both wing halves have been built, join them together and raise each tip to the dihedral of $3\frac{3}{4}$ in. Now fit the dihedral braces and the root ribs as shown on the drawing. When dry, add gussets, etc., and sand to a smooth finish. Cover the upper surface of the centre section with $\frac{1}{8}$ in. sheet balsa where it meets the fuselage underside.

The tailplane is built flat on the plan, sanded to shape, and the dihedral brace cemented in position, after cutting the tailplane in two halves. The mounting of the tailplane is optional, being a small model it can be permanently cemented in position (as was the original) or held in place with rubber bands.

Covering the model is very easy and no trouble should be encountered, lightweight coloured Modelspan is recommended. Several coats of clear dope, thinned out, are applied to all surfaces, and finally a coat of a good fuel proofer should be applied.

It is recommended that fairly heavy rubber wheels be used, thus keeping the c.g. as low as possible. Balance the model and obtain the correct c.g. location by adding weight at the nose or tail.

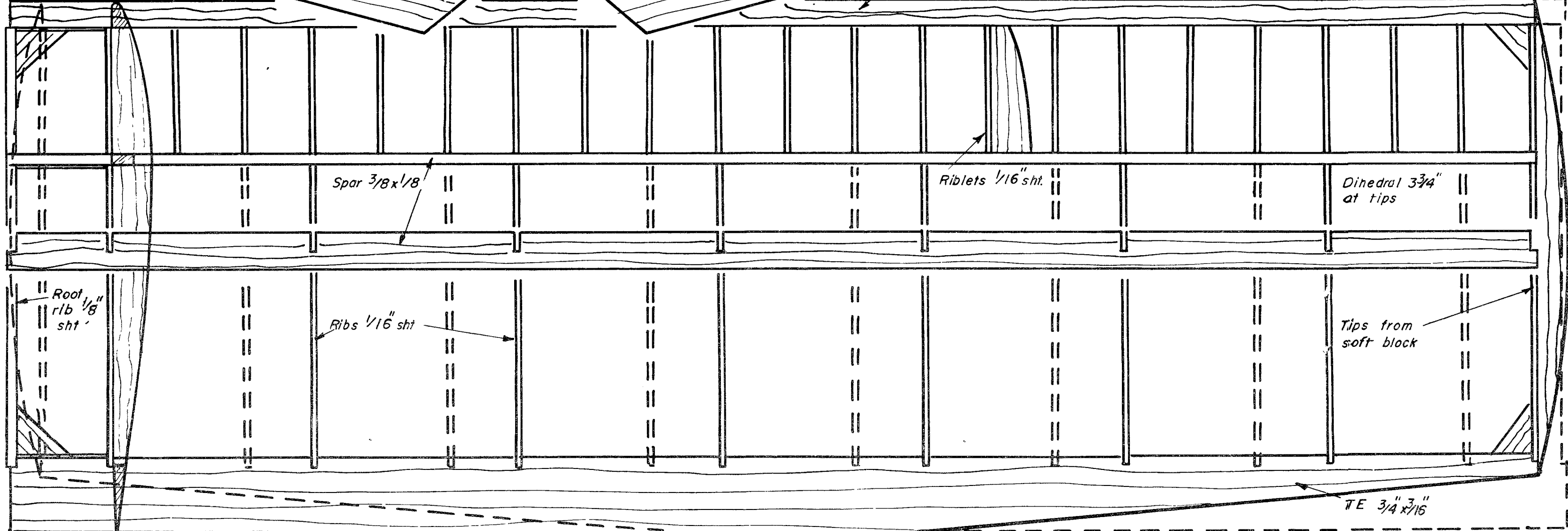
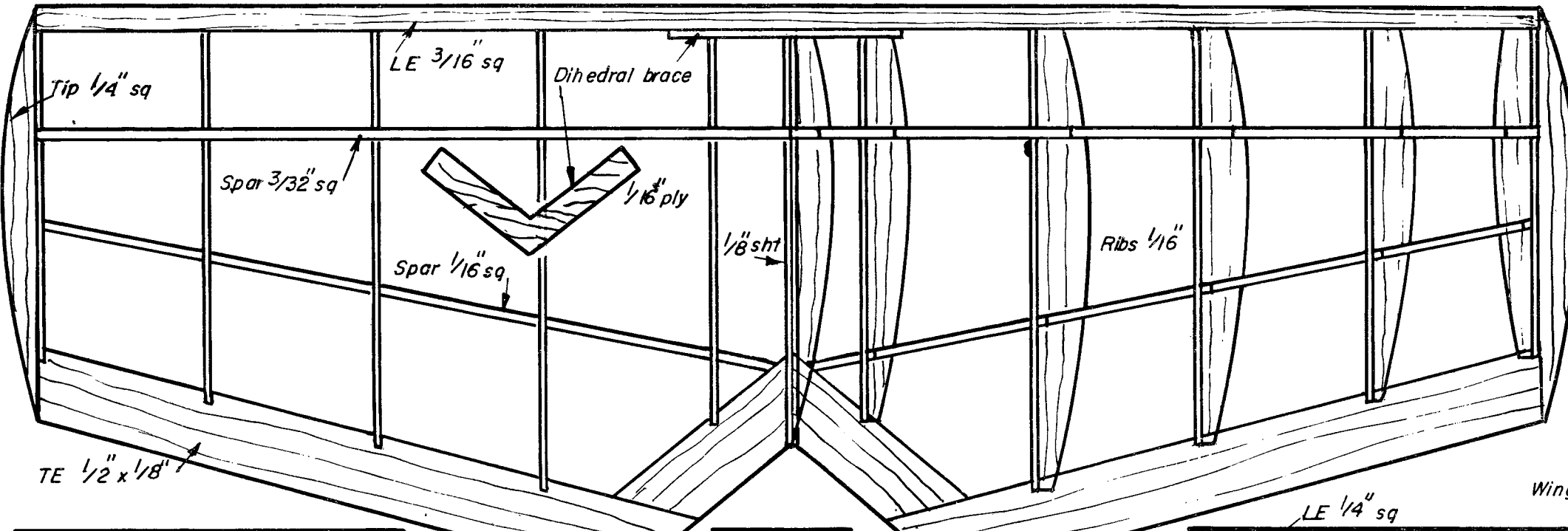
Test glide the model in calm weather, and add any additional weight to ensure a flat glide path. A left or right hand glide is quite satisfactory, the model being very stable. As with all low wing designs, quite a considerable amount of right side thrust is needed to prevent the model from spinning in to the left under power, also it should be remembered that right-hand turns under power always end in failure with this type of model, so be warned! Test on low engine revs, gradually increasing the power and aim for a fairly large radius left-hand climb, to about 300 ft. Test flying may be made safer by reversing the propeller to reduce its efficiency. Happy Landings!

WHAT YOU WILL NEED

Balsa	Qty.
1/16 x 3 x 36 in. ...	2
1/8 x 3 x 6 in. ...	1
1/8 x 3/8 x 36 in. ...	1
1/4 x 1/4 x 36 in. ...	1
1/16 x 1/16 x 36 in. ...	3
3/16 x 3/16 x 18 in. ...	1
3/32 x 3/32 x 18 in. ...	1
1/2 x 1/8 x 18 in. ...	1
3/16 x 3/4 x 36 in. (T.E. Section)	1
1/2 x 1/2 x 12 in. ...	1
Scrap 1/4 x 2 x 6 in. ...	1
Ply 1/8 in. thick small piece.	
16 s.w.g. wire x 36 in.	
1 pair 1/4 in. dia. rubber wheels.	
Lightweight Modelspan, clear dope fuel proofer, etc.	

(Note balsa is normally only sold in 36 in. lengths, but most of the smaller pieces here will be in your scrapbox!)

Wing dihedral brace 3off 1mm ply



DESIGNED as a sports model suitable for all weather flying, Pappy uses the very popular Cox .020 glow motor although a 0.5 c.c. diesel, a Cox Pee Wee or similar engines would be equally suitable. To be a little different from the general design trend, a "V" dihedral tailplane was incorporated and the open cockpit gives a semi-scale appearance.

Construction is commenced by cutting the fuselage sides from $\frac{1}{8}$ in. sheet balsa (remember to trace the extension, do not cut the plan!), together with formers F4 and F8. Formers F2 and F9 are cut from $\frac{1}{8}$ in. sheet. Bend the under-carriage wire to shape and bind it securely to former F2, cementing securely. Cement side piece S1 to the fuselage sides (inside only) and add formers F2 and F6. When dry, cement together the fuselage sides at the rear and add the remaining formers F7 and F9.

Former F1, which should be of a good grade of $\frac{1}{8}$ in. plywood, is marked off for the engine mounting holes and the bolt heads are soldered to a small piece of tinplate before locating, this being well cemented to the rear of the former. This assembly is now cemented in place and left to dry, during which time the rear keel, the $\frac{1}{8}$ in. sq. stringers and sheet covering on the underside of the fuselage and top and bottom of the nose, can be added. Note carefully the direction of the grain when covering the underside of the fuselage.

The engine is now bolted in place, and the $\frac{1}{8}$ in. sheet cowl built up and carved and sanded to shape, it is then carefully removed by cutting with a sharp balsa knife, or razor blade, around the rear edge. The inside of the cowl is given several coats of thick clear dope, followed by two coats of fuel proofer and left to dry, before replacing. The engine

