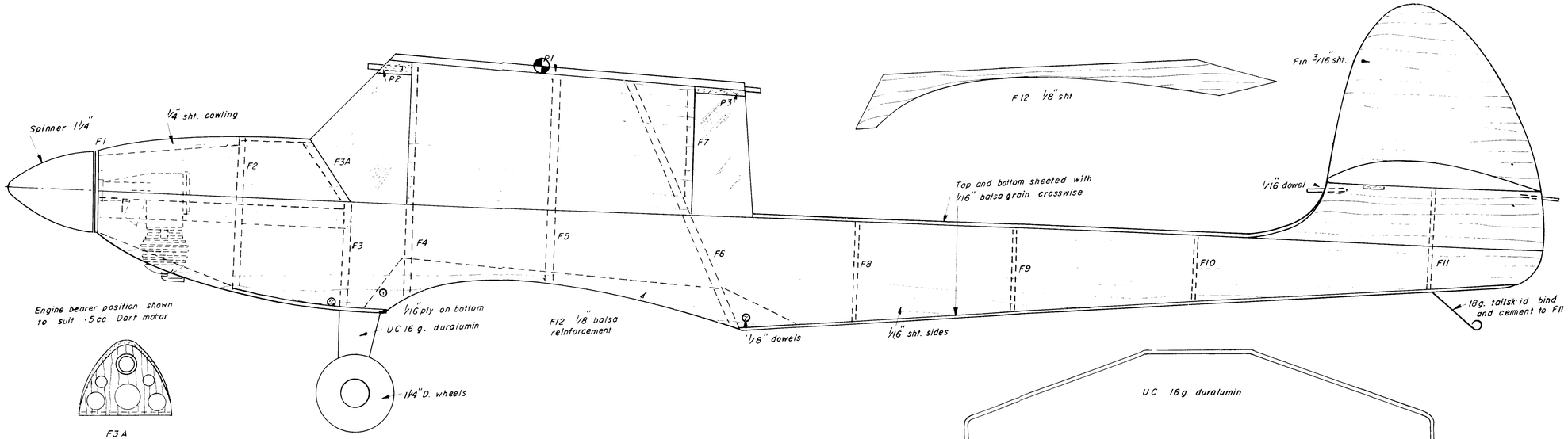
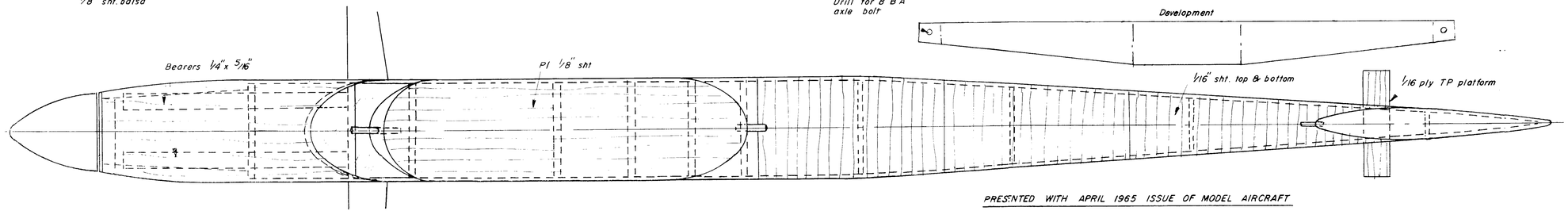
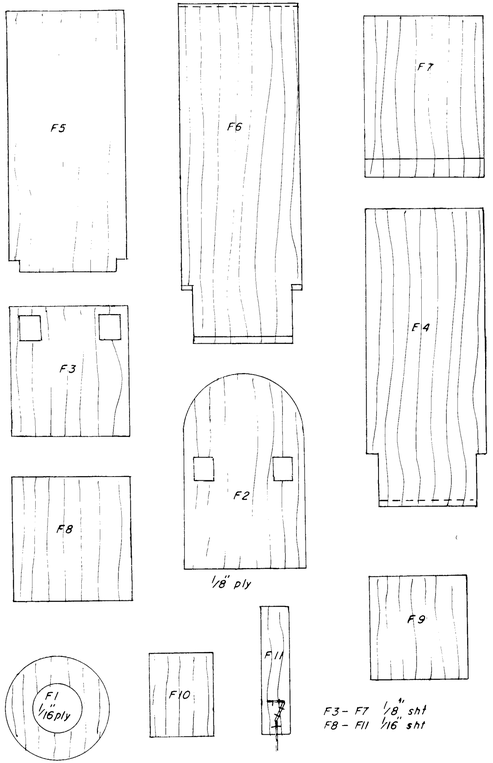
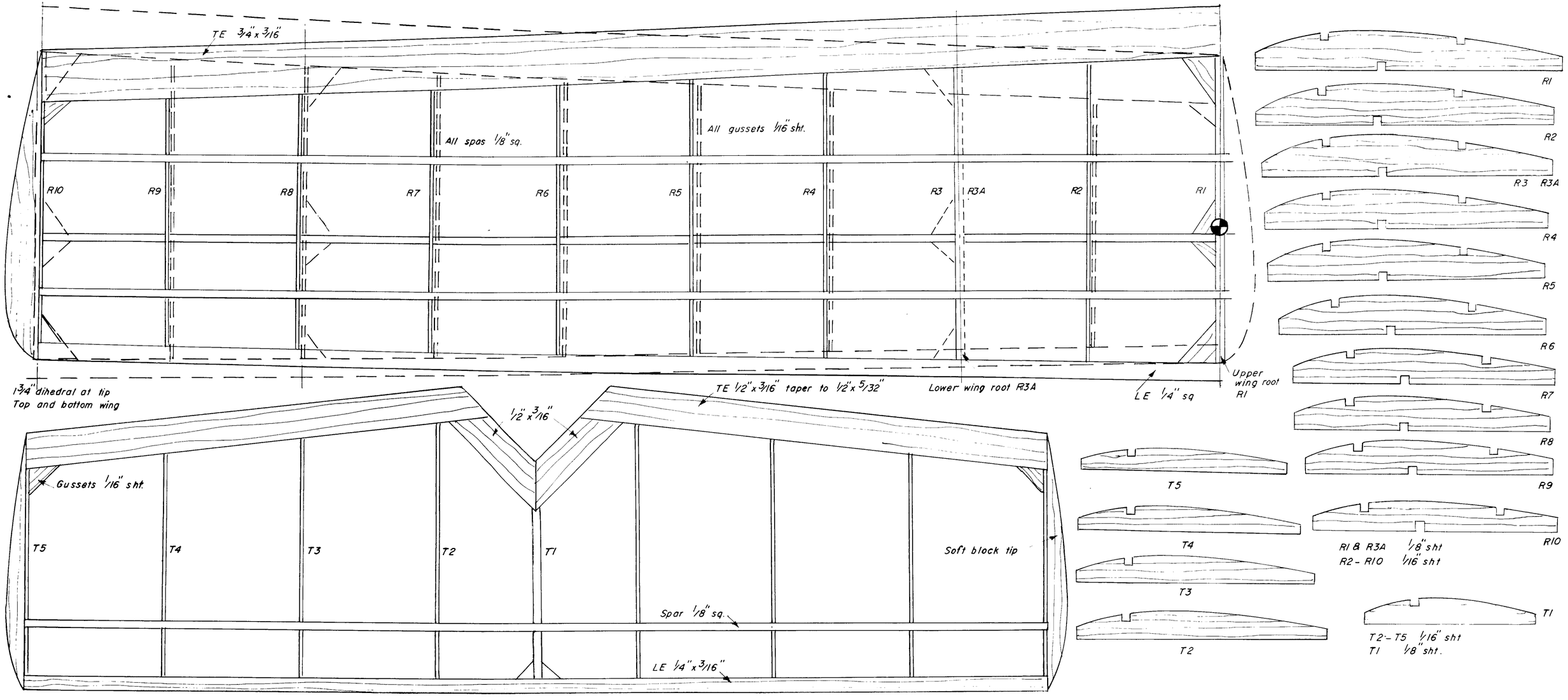






PRESENTED WITH APRIL 1965 ISSUE OF MODEL AIRCRAFT


TE 3/4" x 3/16"
All spas 1/8" sq.
All gussets 1/16" sht.
R10
R9
R8
R7
R6
R5
R4
R3
R3A
R2
R1
1 3/4" dihedral at tip
Top and bottom wing
Lower wing root R3A
LE 1/4" sq
Upper wing root R1
TE 1/2" x 3/16" taper to 1/2" x 5/32"
1/2" x 3/16"
Gussets 1/16" sht.
T5
T4
T3
T2
T1
Soft block tip
Spar 1/8" sq.
LE 1/4" x 3/16"
R1
R2
R3 R3A
R4
R5
R6
R7
R8
R9
R10
T5
T4
T3
T2
T1
R1 & R3A 1/8" sht
R2 - R10 1/16" sht
T2 - T5 1/16" sht
T1 1/8" sht.

FULL SIZE PLAN !

PIPETTE

★ *Easy-to-trim Sportster*
by COLIN READ

PIPETTE was designed as a follow-up model to my M.A. plan *Poppet*, with the same simple construction and pleasing lines. With the widely used dural type undercarriage and no interplane struts, *Pipette* is as near a crashproof design as one can get. Flying is very easy, the only trouble anyone will ever experience is a fly-away!

Silenced engines can quite easily be fitted. In fact any engine of 0.5 to 0.8 c.c. diesel or glow, beam or radial, will suit this design. The original model is now using its third engine, without any variations of trim resulting.

Construction

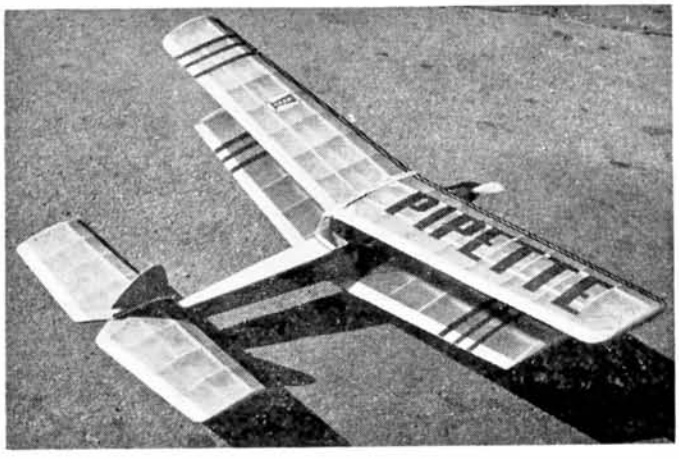
Fuselage: The fuselage sides are cut from good quality $\frac{1}{16}$ in. sheet, butt-joining to obtain the necessary width at the pylon. Cut two F12 $\frac{1}{8}$ in. sheet doublers and cement in place before joining the sides to the formers. Cut out all formers from F4 to F11 and cement into position. F4 to F7 are cemented first and left to dry, followed by F8 to F11.

Cut F2 and F3 to suit the chosen engine. Assemble the engine bearers to F2 and F3 and cement together firmly, then cement to the fuselage sides assembly. Check to ensure correct alignment and add P1 of $\frac{1}{8}$ in. sheet. When dry cement in place P2 and P3. Now sheet the fuselage top and bottom with the grain running crosswise; this ensures a stronger fuselage. The portion between F2 and F3A is planked with $\frac{1}{16}$ in. strips, cut to size.

The engine cowling is built up from $\frac{1}{4}$ in. sheet and lightly cemented in place for carving and sanding to a final shape. Remove it when satisfied and give the inside four or five thick coats of dope. The completed cowl is re-cemented to F2 and any holes or slots for needle valve, fuel filler, compression screw are now made. Sand the completed fuselage and add dowels, and tail mount of $\frac{1}{16}$ in. ply.

No particular fuel tank is shown on the drawing but a M.S. type may be used if there is none already attached to the particular engine chosen.

Wings and tail: Cut out all wing ribs and build the four wing panels flat on the board. Select two good pieces of shaped trailing edge medium quality, and pin down, with the two $\frac{1}{4}$ in. square leading edges. Cement into place all ribs, gussets, etc., followed by the two top spars. The lower spars are added when





the wings have been removed from the building board.

A feature of this design is that no dihedral braces are used, only gussets. I feel that these give ample strength and, if the wing breaks in two, it will almost surely break at the centre joint. With dihedral braces a ragged break results, with gussets, a clean break—so gussets were used! Cement together all panels, check and measure the $1\frac{3}{4}$ in. dihedral under *each* tip and cement again all root joints. The tailplane is built in a similar manner, the fin being just cut to outline and sanded to a streamline section.

Finishing: Now we have a finished model, sandpaper is our next tool. Use it and don't spare the elbow grease. Sand all joints smooth using several grades. Clear dope all the framework, several times, sanding between each coat until a nice surface is obtained for covering. The original model, covered in orange Jap tissue with black trim, is very eye-catching. If you cannot obtain Jap, use coloured lightweight Modelspan, apply at least three thin coats of dope and allow to dry before running the engine. If a glow engine is used, a coat of fuelproofer is required.

The undercarriage is bent from 16 g. ($\frac{1}{16}$ in.) dural and drilled for 8 B.A. wheel-attachment bolts.

Add the windscreens and any cockpit detail if required.

Flying

Test glide over long grass, adding nose-weight should the model stall. Power flights, may be left, right or straight. The original does wide circuits to the right.

Use low engine power to commence, gradually working to full power after six–eight flights with a 10 second engine run. After this you can just rev-up and launch. *Pipette* will give many hours of enjoyable flying in calm, rough and even windy weather. In other words, it will suit our good old English climate.

MATERIALS REQUIRED

1/16 in. sheet	Quantity 3	Dural 9 in. x 3/4 x 16 S.W.G.
1/8 in. sheet	Quantity 1	Ply Small piece 1/8 & 1/16 in.
1/4 in. sheet	Quantity 1	Dowel 6 in. 1/16 in., 12 in. 1/8 in.
1/8 in. x 1/8 in.	Quantity 7	Celluloid 1 sq. ft.
3/4 in. x 1/4 in. T.E.	Quantity 2	1 1/4 in. wheels
1/4 in. x 1/4 L.E.	Quantity 2	1/4 in. x 5/16 in. Bearers 12 in.
1/2 in. x 3/16 in.	Quantity 1	1 1/4 in. spinner
1/4 in. x 3/16 in.	Quantity 1	