A 30¾" Wingspan Free Flight Sports Flying Boat for ·5 – ·8cc (·049) Engines A.P.S. Code BC

MOSES

DESIGNED BY

W. I. Barrett

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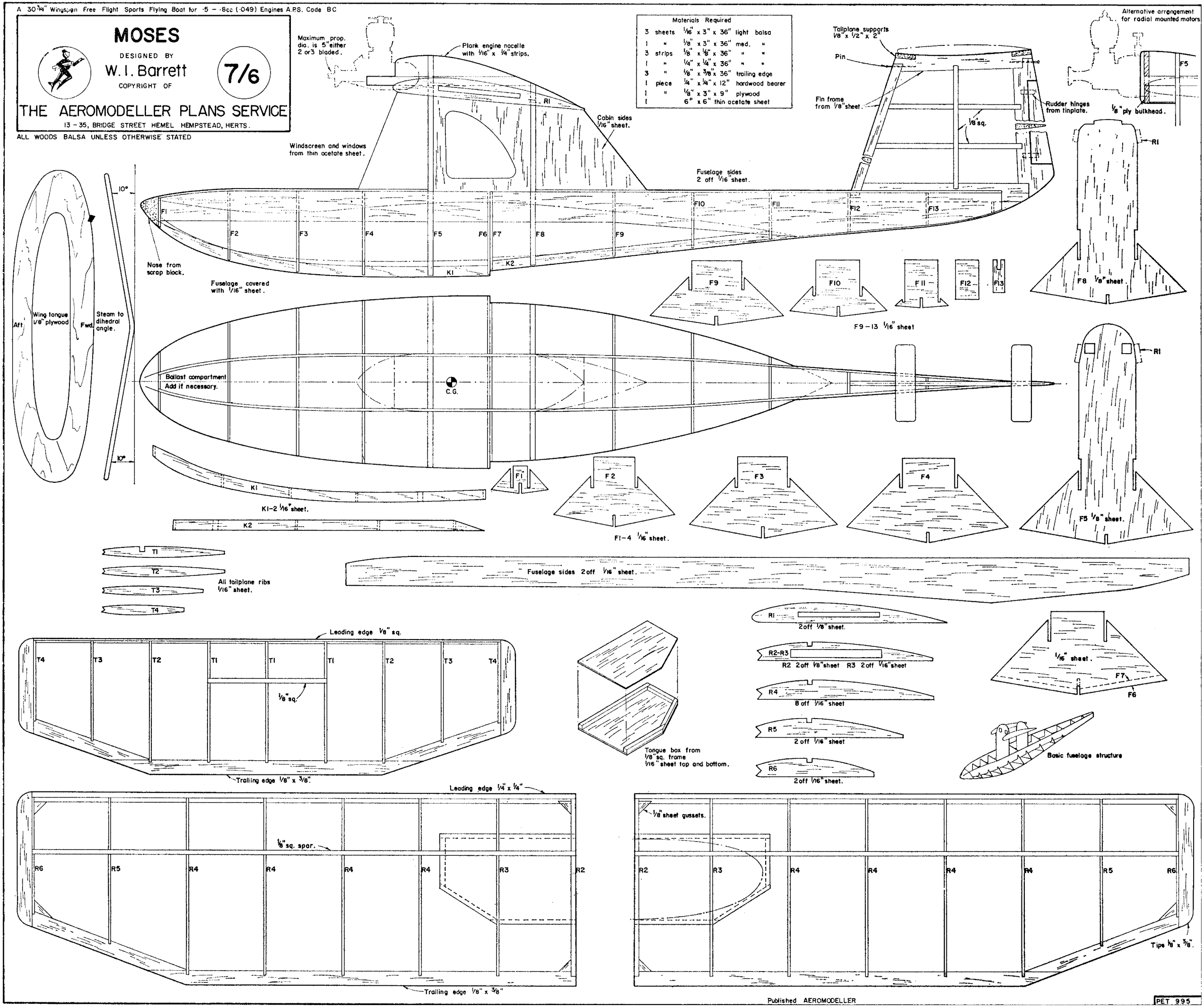
THE AEROMODELLER PLANS SERVICE

13 – 35, BRIDGE STREET HEMEL HEMPSTEAD, HERTS.

ALL WOODS BALSA UNLESS OTHERWISE STATED

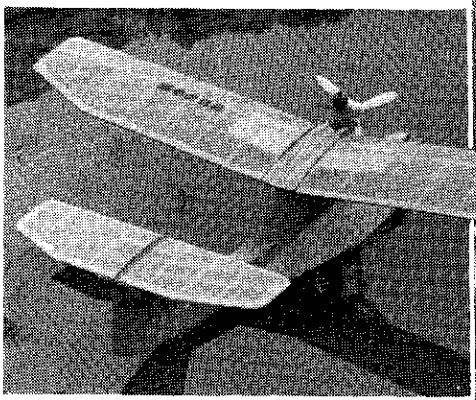
Materials Required			
3	sheets	1/16" x 3" x 36"	light balsa
1	"	1/8" x 3" x 36"	med. "
3	strips	1/8" x 1/8" x 36"	" "
1	"	1/4" x 1/4" x 36"	" "
3	"	1/8" x 3/8" x 36"	trailing edge
1	piece	1/4" x 1/4" x 12"	hardwood bearer
1	"	1/8" x 3" x 9"	plywood
1		6" x 6"	thin acetate sheet

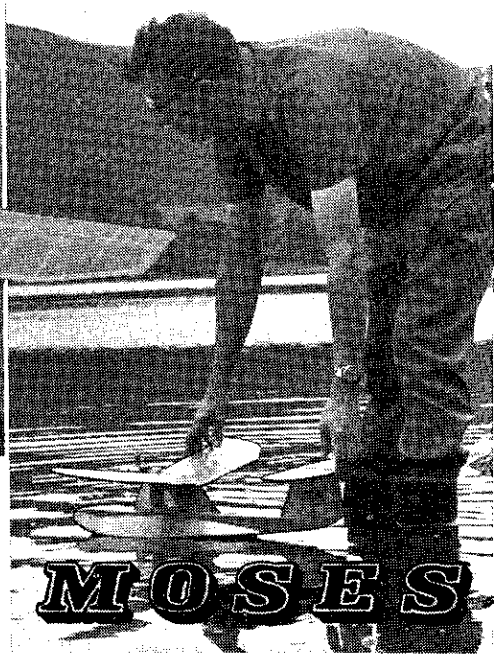


Resolve your flying field problems

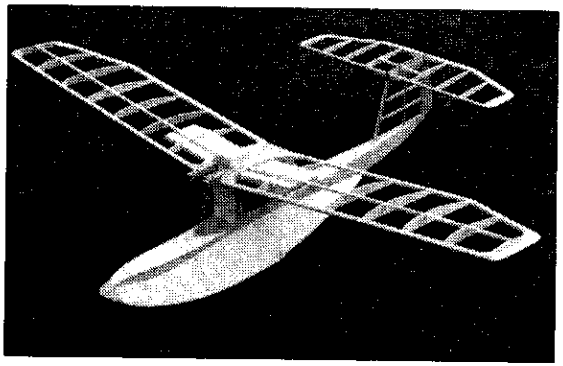
—TAKE TO WATER !!

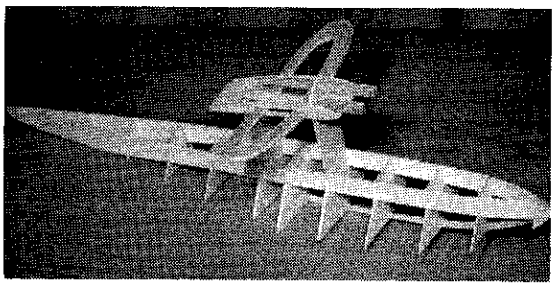
IAN BARRETT'S NOVEL LITTLE TEE-TAIL DESIGN SKIMS ALONG ON H_2O -OR SLIDES SOFTLY ON TO GRASS

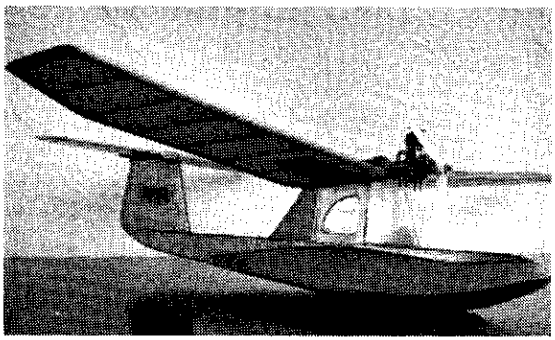




Ian Barrett picks a smooth and glassy lake for tests of prototype with D-C Quickstart Dart .5 cc. diesel. Design takes all the little engines.







MANY MODEL FLYERS dream of trying a flying boat; but because of the lack of suitable nearby stretches of water never bother to build one. Nevertheless, it is surprising how often the opportunity arises for flying boat operation. For instance, after heavy rain (not infrequent in this country) fields become waterlogged with large puddles. At holiday time, stretches of water can usually be found, inviting the use of a small, easily transportable model. 'Moses' was designed with this in mind, and its small size, with removable flying surfaces, allow it to be packed away conveniently with the holiday luggage.

Construction of the fuselage is straightforward. Cut out the two fuselage sides and all the formers, and build up the basic fuselage as shown on the plan. Add the keel pieces and the engine bearers. Very carefully mark the position of the centre section ribs R1 on the formers F5 and F8, and cement the ribs in place. Each rib should be at the same angle of incidence. Make the plywood tongue, and steam the centre until a 10 deg. dihedral angle (20 deg. total) is obtained. This is not as difficult as it may sound. When dry, slide the tongue through the ribs and under the bearers, firmly gluing into position using P.V.A. adhesive. Build up the fin over the plan, and when dry cement it in position in the fuselage, ensuring it is vertical. The remainder of the fuselage can now be sheeted in, with the grain running across the fuselage. Plank the engine nacelle with 1/16 in. x ¼ in. strips, and add the cabin sides, after first cementing the windows to the inside. Fill in the wing section between the ribs with 1/16 in. sheet top and bottom. Add the nose block, and

Left, structural views illustrate the simplicity and yet when finished, the broad hull takes on a fine near-scale appearance. Design is tough too, and superbly stable with deep pylon offering pendulum effect. Try one to take on your 1969 seaside holiday.

sand the fuselage.

The wings are built around the tongue boxes, the boxes being built on the tongue and held together with rubber bands until dry. They can then be removed, and ribs R2 and R3 cemented in position. The rest of the wing is then built in the normal fashion.

Construction of the tailplane also follows standard practice.

After sanding the leading and trailing edges to the correct section, the model is ready for covering.

It is wise to cement ¼ in. wide nylon strips along the keel and outer edges of the fuselage before adding the tissue. Lightweight modelspan is used, two coats of clear dope being added. The fuselage is next varnished to make it waterproof. If polyurethane varnish is used the dope should be allowed to harden for three or four days first, otherwise incomplete protection is obtained.

When the model is completed, check for warps, and steam out any that have appeared. The model should balance level when supported under the wing mainspar. If not, ballast may be added to the front compartment between formers F1 and F2, by cutting a hatch into the top decking. Test glide the model over long grass, final trim being obtained by packing up either the leading or trailing edge of the tailplane as required. When satisfied with the glide, try a short engine run at low power, and if satisfactory, gradually build up the power. The original model did not need any side or down thrust on the engine.

The model lands easily on grass, but, of course, its home is on water. When you have found your stretch of water, start the engine and release into wind. If a crosswind strikes the model, causing it to tip, it will swing slightly and right itself. Take-off is very clean, and requires little power; the original has taken off with a Kalper .32 c.c. diesel running at part throttle. Any engine up to .5 c.c. diesel, or .049 glow, would be suitable (what better than a home-built 'Topsy' as in this issue), but with the larger sizes increase the power with caution – the most pleasing flights are done with a minimum of power, giving a long take off and a lazy climb, followed by a gentle glide back home to a soft landing.

What more do you want on your holidays!