Merbaby

BY

VIC SMEED

POWER

1 LOOP 13" LONG 1/4" x 1/24".

WING.

1/32" VERTICAL GRAIN PLATES ON PYLON.

BUILD UP FROM 1/8" SQ.

CUP WASHER.

SILK PATCH.

20 S.W.G. ALUMN. TUBE.

1/8" SQ.

1/16" DIA. H.W. PEGS.

1/32" SHEET COVERING EACH SIDE.

WING SADDLE

PEGS.

PYLON SLIDES FOR TRIM.

CEMENT L.E. OF TAIL PLANE HERE.

22 S.W.G. REAR HOOK.

CEMENT.

14"

22 S.W.G. U/C (45/8" TRUE LENGTH.)

22 S.W.G. REAR LEG.

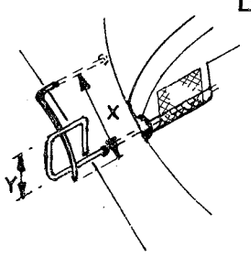
1 3/4" DIHEDRAL.

10"

PAWL

20 S.W.G. SHAFT.

COMMERCIAL 8" PROP.



1/8" SQ.

STARBOARD WING.

FLOAT AS FRONT.

REAR LEG CEMENTED TO TOP OF FLOAT.

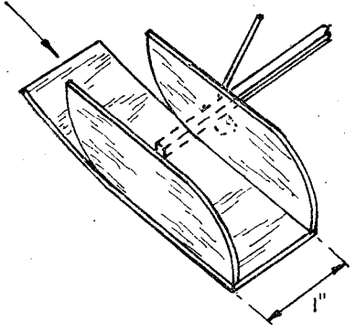
SPREADER FROM 2 - 6 1/2" LENGTHS OF 1/16" X 1/32".

FREE WHEEL ENGAGED - X MUST BE GREATER THAN Y.

4 1/2" BETWEEN INNER FACES OF FLOATS.

CRACK & CEMENT TO DIHEDRAL ANGLE.

FLOATS 3 OFF FROM 1/32" SHEET.



FOIL TRIM TAB.

FIN

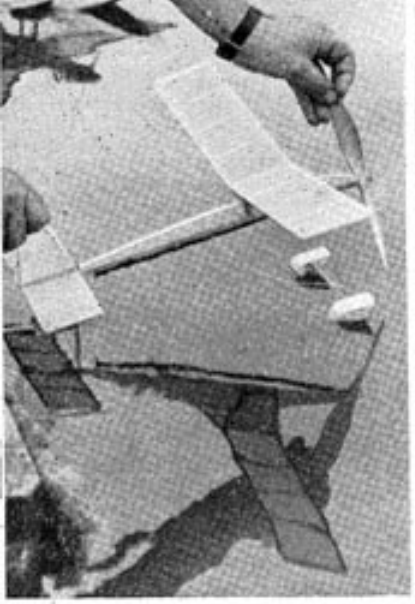
1/8" SQ.

CEMENT TO TAILPLANE.

8 1/2"

TAILPLANE

1/8" SQ.



Nearly head-on view of Miranda about to unstick will carry special memories for us, as it was taken whilst standing in 4 ft. 6 in. of water and missed the camera by scant inches!

Vic Smeed's MERBABY

A 20-inch puddle-jumper for beginner or expert

ONE EVENING'S WORK, four lengths of ¼ sq., half-a-sheet 1/32 x 3, 18 inches of wire, a scrap of tissue, an inch of tube and a propeller—that's the complete list for snappy little Merbaby which will return you fun far in excess of the outlay.

It's a good many years since a stick model was featured in the "AEROMODELLER"; older fans will remember that in the '30s such models were the basic trainers of the day and were regularly featured in the model press, especially in the old American *Flying Aces*. We have retained most of the simple features of these early models, but one or two improvements such as a built-up stick and rubber-held wing have been incorporated.

Pick medium hard "springy" ¼ sq., and lay out the fuselage frame. The rear rubber hook should go into the lower longeron before pinning this down. When the frame is dry remove the pins, cement the frame and lay the entire sheet of 1/32 in place, weighting down to dry. When the cement is set remove the unit from the plan and trim to shape; repeat on the other side. The fuselage is finished by cementing two pieces of ¼ sq. beneath the nose and binding a stub of 20 gauge aluminium tube in place; note the correct downthrust, obtained by trimming the ¼ sq. Coat over the tube and patch with cement.

The tailplane is a simple flat plate, as is the fin. The trim tab can be of very thin aluminium foil or celluloid, or even notepaper. The wing is built one half at a time flat on the plan, omitting the centre "ribs". When the second half is dry crack the spars to dihedral and pin the wing down on edge, cementing in the two short ¼ sq. braces. Now add the two centre ribs. The wing pylon is a ¼ sq. frame; the lower member can be pre-curved in the fingers before assembly. Cover the sides with 1/32 sheet as with the fuselage, and when dry clean up and round fore and aft before adding the side plates and stub pegs, which can be pared from a matchstick. The flying surfaces are covered on one side only, with lightweight *hard* tissue, without even rounding the edges. A coat of very thin banana oil is all that is required, but make sure that there are no warps. Cement the wing to the wing-mount and the fin and tail-plane in place when the banana oil is thoroughly dry.

The airscrew on our original was a stock 8 in. KK propeller which we merely sanded lightly and checked for balance; the 7½ in. KK plastic prop. should prove quite as suitable. Bend the rubber hook, slide the shaft through the nose bearing, fit on a cup washer and the propeller (which is best bushed with tubing) and bend the front loop. The freewheel pawl is fitted through an unbushed hole and should swivel freely; check that the operation is satisfactory.

Nothing further need be done for landplane flying, although a tail skid and wheel undercarriage makes operation much more fun. Use ¾ in. lightweight wheels. The float gear is built by cutting six identical 1/32 sheet sides and cementing these upright on 1 in. wide strips of 1/32, cross grained. When the initial cement is dry the sheet can be bent round the float; the top is covered in the same way. Bear-claw floats of this size need no internal structure. The mounting wires are bent into a diamond at their extremities and cemented against the floats with two or three coats of cement. We used 24 g. wire and found it necessary to attach

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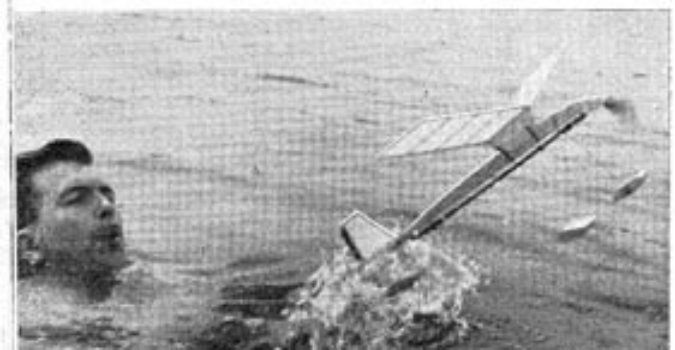
Full-size plans overleaf for MERBABY



Ye Editor, Harry Hundleby, makes a "Whoosh" launch of Merbaby out in midstream. The little model carried on for a 30-second flight and alighted upright, safe and dry

Full-size copies of the 15th scale plans of Miranda opposite are available from AEROMODELLER PLANS SERVICE, price 1s. 6d. post free

Merbaby (Continued from page 522)

cotton braces, but if 22 g. wire is used with a $\frac{1}{16}$ x $\frac{1}{8}$ cross brace between the floats no other bracing is necessary. One 13 in. loop of $\frac{1}{4}$ x 24 rubber brought our finished weight to just $\frac{3}{4}$ oz., including two thorough coats of banana oil on the floats. If you expect to fly over a large area of water where the model may alight back on water, it is advisable to banana oil the fuselage as well.

We found the best trim was slight right rudder with a little wash-in (leading edge $\frac{1}{8}$ in. high) on the port wing. Slide the wing forward or back until the model balances approximately at mid-chord, take up the slack in the rubber with a few turns, and check for glide. When the right position for the wing is found, mark it clearly. On maximum turns (450 or so) you should hit a consistent 30 secs. plus—the neater and lighter your construction the higher your flight average will be.

MIRANDA

Peter Holland's Flying Boat for ·75 or 1 c.c.

THIS IS A MODEL that can be flown "wet or dry". Although designed as a Flying Boat, an undercarriage can be plugged into the solid sponson tips, and Miranda becomes a landplane ready for R.O.G. in grass or on tarmac until you locate your nearest stretch of suitable water. Simple structure, a flat hull planing bottom, the large cabin, and protected propeller position on the high engine mount are but few of the many points in favour of this attractive model which flew through flight tests with an Allbon Merlin.

We found that it liked a wide left climb after the beautiful long skating take-off run, and a touch of right rudder on the trim tab gave it a smooth right hand glide approach back to a skimming "landing" —and if that's not enough to tempt you, we can also say that Pete Holland made the prototype in a week of evenings, just to show how simple it is!

A glance at the sketch on the plan shows how the fuselage, or hull, is assembled around two vertical keels of $\frac{3}{32}$-in. with the central parts of the first six formers mounted between them. The rear hull tapers to a joint of the keels, and outer bulkhead portions complete the hull section back to the rear step. Solid sponsons are mounted integral with the hull, $\frac{1}{8}$-in. sheet forms the bow block and tail platform, and we are ready to cover with $\frac{1}{32}$-in. sheet. Mounted over F4 and F5, the engine nacelle becomes an automatic assembly of tongue, bearers, and formers with $\frac{1}{8}$-in. covering the top forward section and $\frac{1}{16}$-in. at the rear. An M.S. tank in the engine compartment can be hidden by the detachable access hatch, and a $\frac{1}{4}$-in. sheet cowl ring, C.1, adds much to the appearance.

Miranda and Merbaby make flotation tests in calm water

There remains the cabin "divider" of $\frac{1}{32}$-in., over which the celluloid windows are applied, then a final layer of thin card or $\frac{1}{32}$-in. sheet forms an outer protection against water seepage. $\frac{1}{16}$-in. diameter reed will enhance the edge of the windows and also make sure of a watertight joint. We cannot place too much emphasis on this waterproofing business, as the model is a lightweight, and it is surprising how this soon becomes heavyweight after a day on the water, should the proofing not be good enough.

If you do find the cabin showing signs of water content, cut a hatch in the centre section top to let it dry out, or you might find yourself with a glasshouse full of balsa fungi—even mushrooms might germinate on the damp interior!

Wings and tail of Miranda are simplicity itself. Each wing panel seats on to the centre section tongue and is held in place by a match stick shear pin through spars, box and tongue, while the "vee" form of the tail ensures accurate alignment on its planform.

Remember to put your name and address label inside the cabin before completing the fuselage, cover with lightweight Modelspan, dope liberally and then waterproof with Aerolac or similar clear varnish . . . and you are ready for taking the air with one of the smartest hydromodels it has been our pleasure to fly.