KARORO

DESIGNED BY

J. SHEPPARD 4/6

THE AEROMODELLER PLANS SERVICE
39 CLARENDON RD. WATFORD. HERTS.

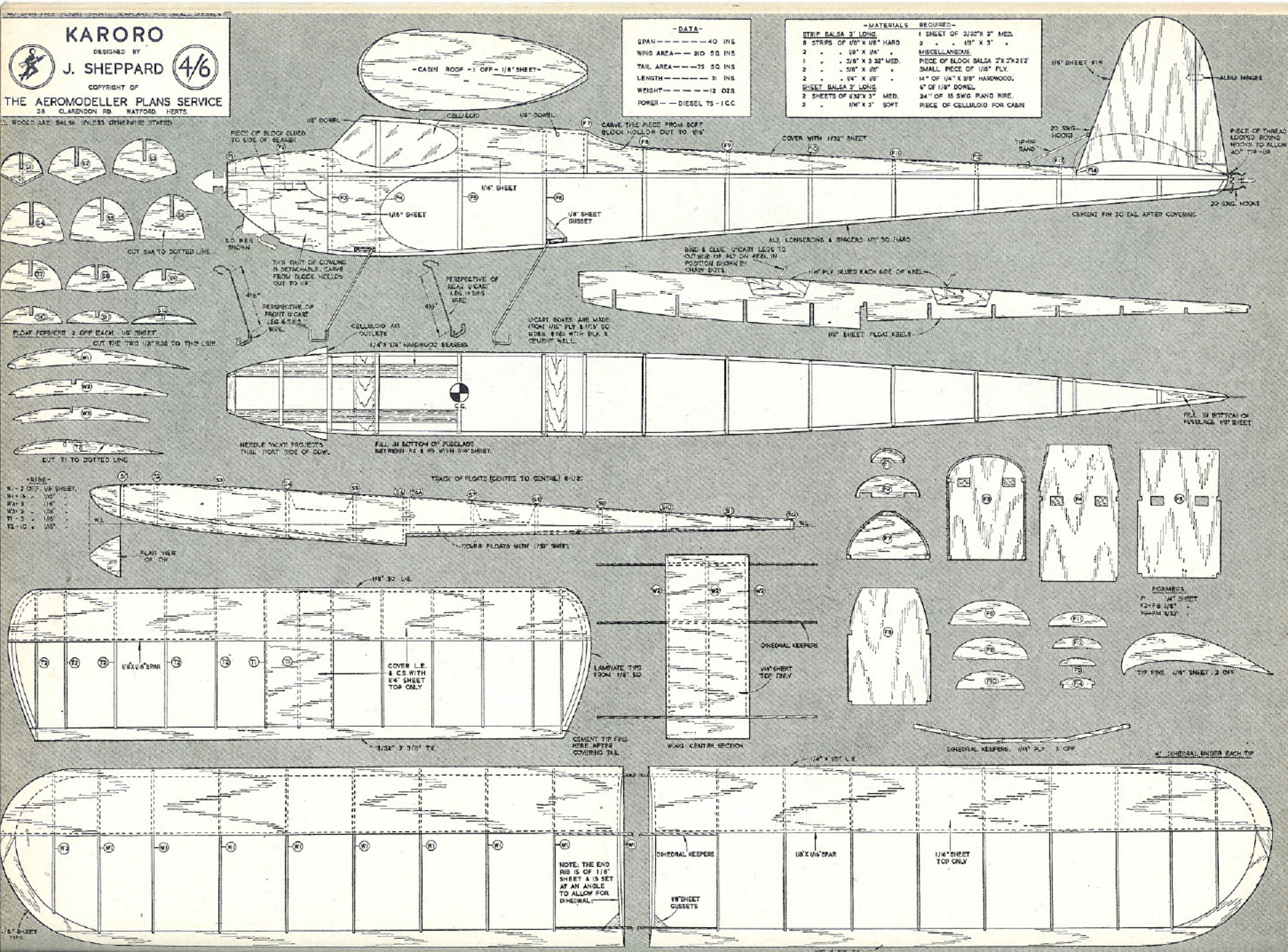
ALL WOODS ARE BALSA UNLESS OTHERWISE STATED

-DATA-

SPAN	40 INS.
WING AREA	210 SQ. INS.
TAIL AREA	75 SQ. INS.
LENGTH	31 INS.
WEIGHT	12 OZS.
POWER	DIESEL 75 - 1 CC

-MATERIALS REQUIRED-

STRIP BALSA 3' LONG	1 SHEET OF 1/32"X 3" MED.
8 STRIPS OF 1/8" X 1/16" HARD	2 " " 1/8" X 3" "
2 " " 1/8" X 1/16" "	MISCELLANEOUS
1 " " 3/8" X 3 32" MED.	PIECE OF BLOCK BALSA 3"X 3"X 2 1/2"
2 " " 3/8" X 1/8" "	SMALL PIECE OF 1/16" PLY.
2 " " 1/4" X 1/8" "	14" OF 1/4" X 3/8" HARDWOOD.
SHEET BALSA 3' LONG	6" OF 1/8" DOWEL
2 SHEETS OF 1/32"X 3" MED.	24" OF 16 S.W.G PIANO WIRE.
2 " 1/16"X 3" SOFT	PIECE OF CELLULOID FOR CABIN

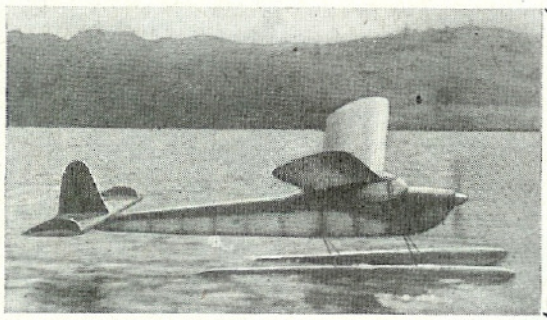


-RIBS-

W1 - 2 OFF. 1/8" SHEET.
W1A - 2 " 1/16" "
W2 - 3 " 1/16" "
W3 - 2 " 1/16" "
T1 - 3 " 1/16" "
T2-10 " 1/16" "

FORMERS.
F1 1/4" SHEET
F2-F8 1/16" "
F9-F14 1/32" "

TIP FINS 1/16" SHEET. 2 OFF



KARORO

A 40 ins. FLOATPLANE FROM NEW ZEALAND

By John Sheppard

New Zealand farmer's son . . . country member N.Z.M.A.A. . . . interested in all kinds of model flying . . . holder N.Z. Waterplane (rubber) record.

KARORO is the Maori word for a Seagull, and since this little cabin floatplane originates from "down under" in New Zealand, it is a very appropriate term for a model that can alight and take off as gracefully as its namesake. Designed in 1950 so that John Sheppard could take advantage of nearby lakeside flying sites, the Karoro flew straight "off the drawing board"—the only adjustment required for perfect flight being an occasional twist of the E.D. Bee's compression vernier! First flights were made with hand launch, then an off water take off check was made. At the end of a beautiful 20 yard run, Karoro "unstuck" and made her customary left-hand climb and smooth glide back to water level. The flexible plastic 8 × 4 in. propeller was changed for a wooden equivalent, with the result that take-off was shortened considerably.

Long tail moment is a characteristic of this simple model which makes for a very high degree of stability—even if your interest is not inclined toward a floatplane, a land version would provide you with a smart sport model of the easy to build, easy to fly variety. Average duration using a 20 seconds power run with the Bee diesel is in the region of 1 : 20 for the floatplane.

Construction

Begin with the **fuselage** by pinning down two straight lengths of $\frac{1}{8}$ square longeron material and joining with spacers from F8 station rearwards. Make two sides, remove from board after marking positions for F3, F6. Pin sides upside down over plan view, add spacers from F8 rearwards, remove from board and fit F3, 4, 5, 6. Attach cabin roof, soft block, and F7, 14. Fit engine bearers and F1 and 2. Undercart boxes, gussets and d/t hook are fitted before sheeting top half and front sides with 1/16th. Celluloid screen is next, then wing dowels and engine cowling block. Sheet **fin** has portion cut out and hinged for trimming and d/t hooks added before sanding smooth and prepared with sanding sealer. **Tailplane** and **wing** construction is straightforward, leading edge sheet covering is best applied whilst the components are still pinned to the building board. Make the wing in three panels, joined by dihedral keepers and then when wing is in one piece, pin each panel in turn onto board for sheeting . . . don't forget the tailplane **tip fins.**

The **floats** are made by half lapping the bulkheads over the keel then covering the bottom aft of the step with 1/32nd sheet, and forward of the step with 1/16th. Ply strengtheners are cemented on each side of the keel at the undercart points and the float tops covered with 1/32nd. Add the nose blocks, then when thoroughly dry, sand the whole down smooth and cut through top sheeting at undercart points, push wire saddles over keel and ply facings, add plenty of cement and seal the gaps with scrap balsa. An alternative is to bind the legs in place before sheeting. Sanding sealer is best applied liberally as a protective.

Cover the entire job with lightweight Modelspan, give two coats of dope to fuselage, wings and tail, three coats to the floats, followed by one of banana oil or similar non-shrinking waterproofing finish. Very little trimming will be necessary, perhaps an eighth inch movement at the trim tab t.e. and slight motor offset at the very most.

. . . and don't forget the d/t fuse, over water lift is by no means uncommon!!

Full size copies of the $\frac{1}{4}$ scale plan opposite are available 4/6 post free through A.P.S.

Peaceful N.Z. lakeside scene as Karoro comes in on a 'landing'.