ROMAC "PERSONAL" SET

The Romac Personal receiver Model 106 is a battery portable 9½ ins. long, 6 ins. deep and 2¼ ins. wide, with a shoulder-strap handle incorporating an aerial. Circuit is a 4-valve superhet working from all-dry batteries and using miniature valves. Weight is 4½ lbs. Makers are: Romac Radio Corporation Ltd., The Hyde, Hendon, London, NW9.

THE loop aerial L2, which is formed by four turns of plastic-covered wire, is used as a shoulder sling to carry the receiver. L2 is connected in series with L1, an iron-dust cored loading inductance. L1 and L2 are tuned by VC1, trimmed by T1.

V1 is a pentagrid convertor, and the signal developed across L1, L2, VC1 is fed to G3. L4 is the oscillator grid coil tuned by VC2 and damped by R15. T2 is the oscillator trimmer, and C5 the padding capacitor. The oscillator grid, G1, is given leak-condenser bias by C4, R1.

L5, the oscillator anode coil, is series fed and taken to G2, G4 of V1. Oscillator HT is derived from R2 decoupled by C6. L4 and L5 are coils of the permeability-tuned iron-dust core type.

L3, C2 tune the anode of V1 to the intermediate frequency, trimming being by adjustable iron-dust core. The signal is capacity fed by C3 to R4 in the grid of V2, the IF amplifier. AVC is fed to grids of V1 and V2 *via* R5 decoupled by C1. Screen voltage for V2 is obtained from R3 decoupled by C7.

L6, the primary of a permeability-tuned IF transformer, is in the anode of V2. L7, C8 form the secondary and feed the signal to the single diode of V3.

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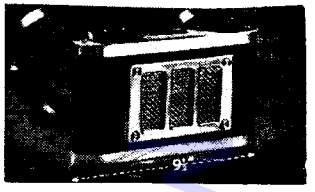


V1-1R5: A 61 V ·2 mA; OA 37 V ·18 mA; OG; SUP; CG; F+1·3 V; FE

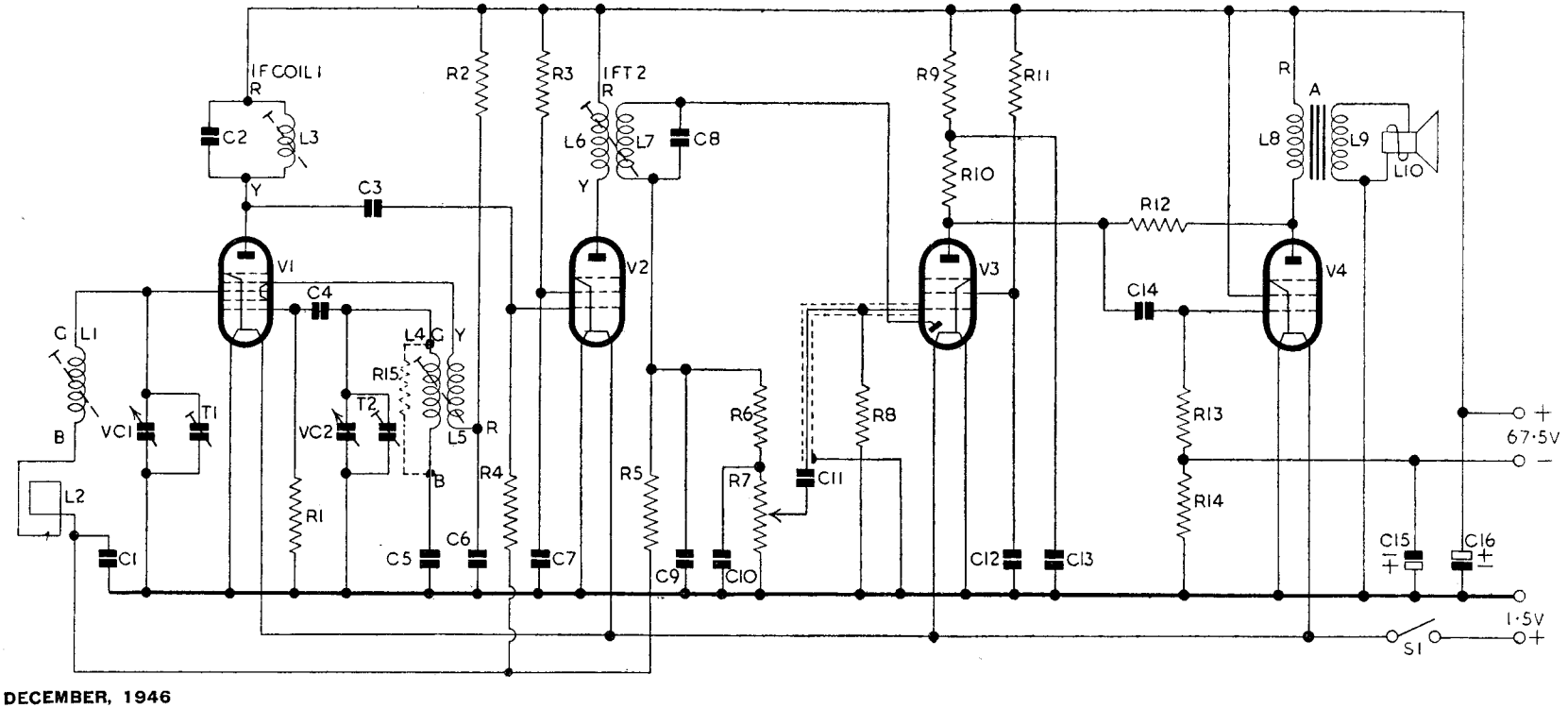
V2-1T4: A 61 V 1·45 mA; S 50 V ·26 mA; SUP; G; F+1·34; FE

V3-1S5: ✱ S ·02 mA; ✱ A ·04 mA; G; F 1·3 V; FE

✱ NOTE: DUE TO HIGH ANODE AND SCREEN RESISTORS VOLTAGE READINGS IMPRACTICAL

V4-1S4: S 61 V 1·3 mA; SUP; A 60 V 3·75 mA; A 60 V; F+1·3 V; FE

ALL READINGS TAKEN ON MODEL 7 AVOMETER



BATTERIES

Batteries used are : Ever-Ready U2, 1.5 V. for LT; Ever-Ready Batrymax B 101, 67.5 V, for HT.

RESISTORS

R	*Ohms*
1	100 K
2	10 K
3	10 K
4	2.4 M
5	1 M
6	100 K
7	1 M variable
8	10 M
9	100 K
10	1 M
11	3.3 M
12	3.3 M
13	3.3 M
14	680
15	100 K

CAPACITORS

C	*Mfds*	*Type*
1	.1	Tubular 150 v
2	125 pf	Silver Mica
3	100 pf	Ceramic Tube
4	33 pf	Ceramic Tube
5	350 pf	Silver Mica
6	.1	Tubular 150 v
7	.1	Tubular 150 v
8	200 pf	Silver Mica
9	100 pf	Ceramic Tube
10	100 pf	Ceramic Tube
11	1500 pf	Ceramic Tube
12	.1	Tubular 150 v
13	.1	Tubular 150 v
14	1500 pf	Ceramic Tube
15	25	Electrolytic 25 v
16	2	Electrolytic 150 v

INDUCTORS

L	*Ohms*
1	2.25
2	.1 approx.
3	8
4	3.4
5	1.5
6	9
7	6.5
8	400
9	.6
10	2.75

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Continued

R7 is volume control and diode load. R6, C9, C10 form a conventional IF filter. AVC is taken from top of R6 and is fed *via* R5 to grids of V1 and V2.

C11 transfers the audio signal to grid of pentode section of V3. R8 is its grid resistor. C11 and R8 provide self-bias for V3. Screen voltage is derived from R11 decoupled by C12.

R10 is the anode load of V3 with R9 and C13 or decoupling.

C14 feeds the amplified signal to grid of V4, a pentode output valve. R13 is its grid resistor. Automatic bias for V4 is developed across R14, which is in the HT negative return to chassis. C15 is the bias decoupling capacitor. Negative feedback is supplied by R12 between the anodes of V3 and V4.

L9, the secondary of the output transformer, feeds L10, a low-impedance speech coil, earthed on one side.

HT, decoupled by C16, is supplied by a 67.5V battery of particularly small dimensions. Filaments are supplied from a 1.5V cell of standard type. S1, operated by volume control spindle, is the on/off switch.

TRIMMING INSTRUCTIONS

Apply Signal as below	Tune Receiver to	Adjust in Order stated for Max. Output
(1) 465 KC to grid of V1 *via* .01 capacitor	550 metres	Cores of L6, L7, L3
(2) 1,200 KC to loop aerial *via* link coupling of 2 or 3 turns of wire wrapped around plastic covering of loop AE	250 metres	T2, T1
(3) 600 KC as above	500 metres	Cores of L4, L5, L1. Repeat (2) and (3) until dial is aligned correctly

LAYOUT OF DIAL PLATE AND DRIVE