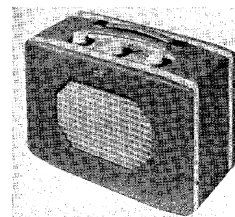


ROBERTS - CR, BR

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	M.W. frame, total...	5.0	—
L2	L.W. frame aerial...	29.0	—
L3	Osc. tuning coil ...	5.4	D3
L4	Osc. reaction coil ...	1.5	D3
L5	1st I.F. trans. { Pri.	9.7	C2
L6		9.7	C2
L7	2nd I.F. trans. { Pri.	9.7	A1
L8		9.7	A1
L9	Speech coil ...	3.5	—
L10	L.T. smoothing choke ...	4.0	D4
T1	O.P. trans. { Pri.	460.0	A2
	Sec.	0.4	—
T2	Mains { Pri., total	324.0	—
	HT. sec. ...	194.0	C2
	L.T. sec., total	0.8	—
S1-S3	Waveband switches	—	E3
S4(M)-S9(M)	Mains/batt./off sw.	—	E3
S10, S11	Battery switches ...	—	—
MR1	SenTerCel RMO ...	—	F4
MR2	SenTerCel V35-1-W	—	E4

CAPACITORS		Values	Locations
C1	V1 C.G. ...	100pF	E3
C2	V1 S.G. decoupling	0.05μF	E3
C3	1st I.F. trans. {	100pF	C2
C4		100pF	C2
C5	V1 osc. C.G. ...	100pF	E3
C6	Oscillator tracker...	620pF	E3
C7	L.W. osc. trim. ...	547pF	C1
C8	A.G.C. decoupling	0.05μF	E3
C9	H.T. decoupling ...	0.05μF	D3
C10	2nd I.F. trans. {	100pF	A1
C11		100pF	A1
C12	I.F. by-pass ...	100pF	F4
C13	A.F. coupling ...	0.005μF	G3
C14	H.T. decoupling ...	0.1μF	F3
C15	Neg. feed-back ...	50pF	G3
C16	V3 S.G. decoupling	0.05μF	G4
C17	I.F. by-pass ...	100pF	G3
C18	A.F. coupling ...	0.005μF	G3
C19	Tone corrector ...	0.002μF	A2
C20*	G.B. decoupling ...	20μF	G4
C21*	H.T. smoothing ...	32μF	F4
C22†	L.W. aerial trim...	40pF	B1
C23†	M.W. aerial trim...	40pF	B1
C24†	Aerial tuning ...	528pF	B1
C25†	Oscillator tuning ...	528pF	B1
C26†	M.W. oscillator trim.	40pF	C1
C27†	L.W. oscillator trim.	40pF	C1
C28*	H.T. reservoir ...	24μF	F4
C29*	L.T. smoothing ... {	2,500μF	B2
C30*		2,500μF	B2

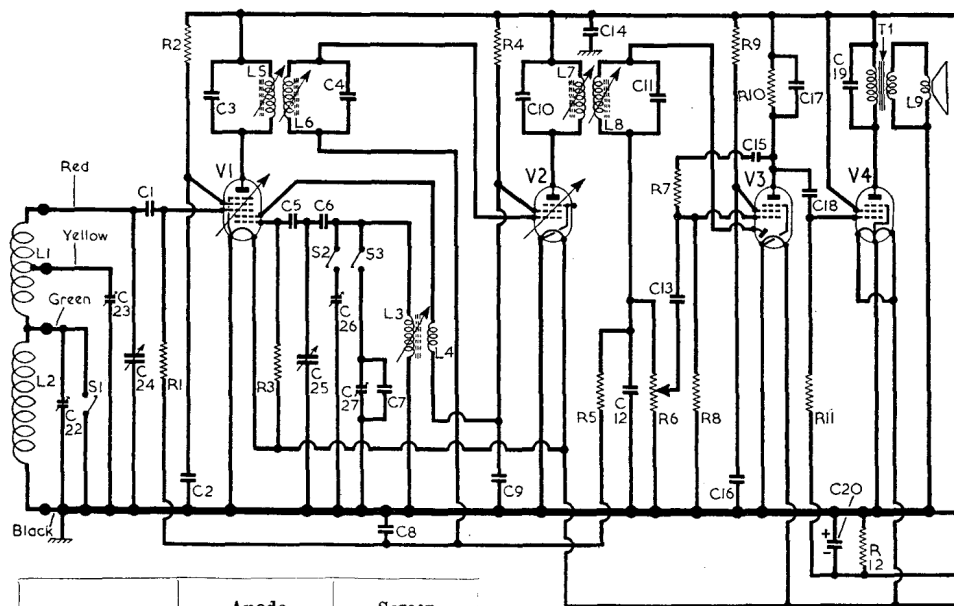


Appearance of the Roberts CR and BR portables. The white plastic bands round the case cover the frame arials.

RESISTORS		Values	Locations
R1	V1 C.G. ...	2.2MΩ	E3
R2	V1 S.G. feed ...	180kΩ	D3
R3	V1 osc. C.G. ...	27kΩ	E3
R4	H.T. decoupling ...	27kΩ	F4
R5	A.G.C. decoupling	4.7MΩ	E4
R6	Volume control ...	1MΩ	G3
R7	Neg. feed-back ...	10MΩ	G3
R8	V3 C.G. ...	4.7MΩ	G3
R9	V3 S.G. feed ...	4.7MΩ	G3
R10	V3 pentode load ...	560kΩ	G3
R11	V4 C.G. ...	2.2MΩ	G3
R12	V4 G.B. ...	390Ω	G4
R13	H.T. smoothing ...	1.8kΩ	F4

Intermediate frequency 470 kc/s.

* Electrolytic. † Variable. ‡ Pre-set.



Valve	Anode		Screen	
	V	mA	V	mA
V1 DK92	85	0.44	44	0.1
	28	2.1		
V2 DF91	85	1.4	28	0.22
V3 DAF91	11	0.1	4	0.016
V4 DL94	81	6.5	85	1.5

CIRCUIT ALIGNMENT

I.F. Stages.—Remove chassis from carrying case. Connect output of signal generator to junction of C1, C24, and to chassis. Switch receiver to M.W., turn gang to minimum and volume control to maximum. Feed in a 470 kc/s (638.3m) signal and adjust the cores of L8 (location reference A1), L7 (F3), L6 (C2) and L5 (E4) for maximum output, reducing the input as the circuits come into line to avoid A.G.C. action. Repeat these adjustments until no further improvement results.

R.F. and Oscillator Stages.—These adjustments may be carried out with the chassis in its carrying case. Check that with the gang at maximum capacitance the cursor coincides with the high wavelength ends of the tuning scales. Disconnect signal generator leads from the chassis and lay them close to the frame arials in the receiver.

M.W.—Switch receiver to M.W. and tune to 510m. Feed in a 510m (588.1kc/s) signal and adjust the core of L3 (C1) for maximum output. Feeding in the same frequency, adjust the inductance of the M.W. frame aerial L1 for maximum output. This last operation may be performed by removing the white plastic band from the rear edge of the carrying case, and varying the spacing of the M.W. frame aerial turns thus revealed. Tune receiver to 210m, feed in a 210m (1.429 kc/s) signal and adjust C26 (C1) and C23 (B1) for maximum output.

L.W.—Switch receiver to L.W., tune to the "Luxembourg" calibration mark on tuning scale, feed in a 1.298m (233 kc/s) signal and adjust C27 (C1) and C22 (B1) for maximum output.

Model BR.—This is similar to Model CR, but is for operation from all-dry batteries only. Apart from the absence of the mains power supply components and the connection of the negative side of C21, the only other difference between this and Model CR is that the waveband/off switch is a single-unit 3-position control. In the circuit diagram overleaf two power input circuits are shown, one for the CR and one for the BR, the main section of the diagram being common to both.

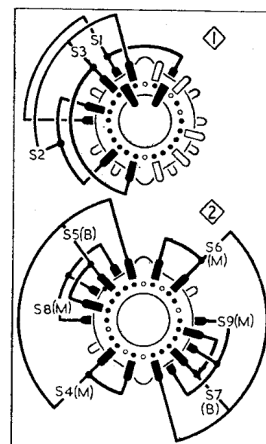
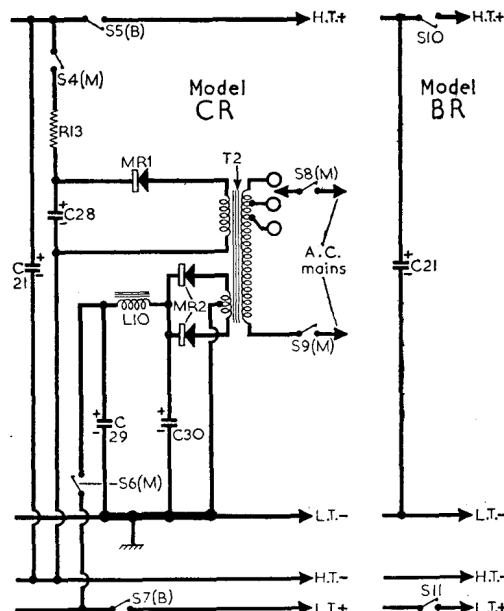


Diagram of the waveband switch unit (above) and mains/battery/off switch unit (below) drawn as seen from the rear of an inverted chassis.