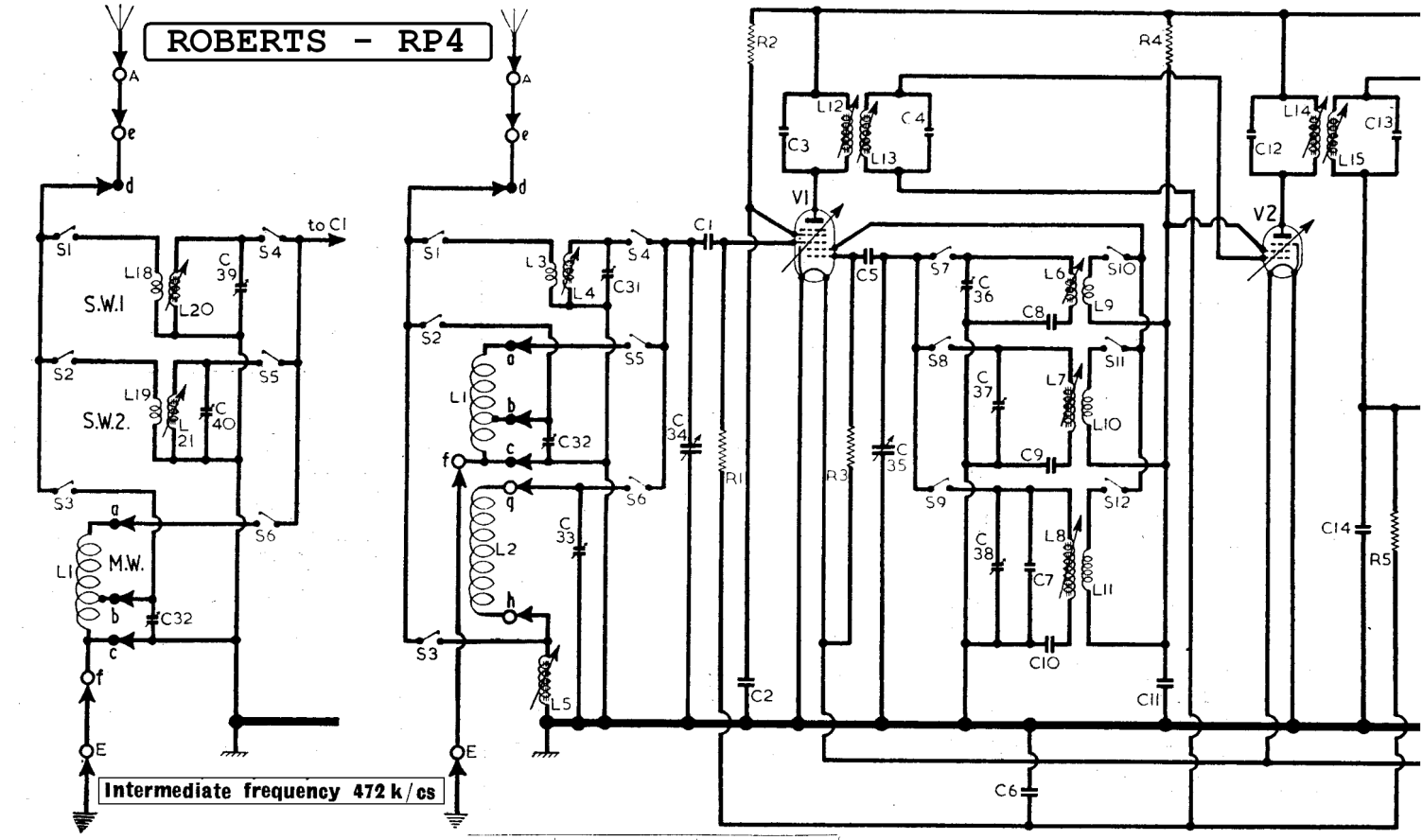
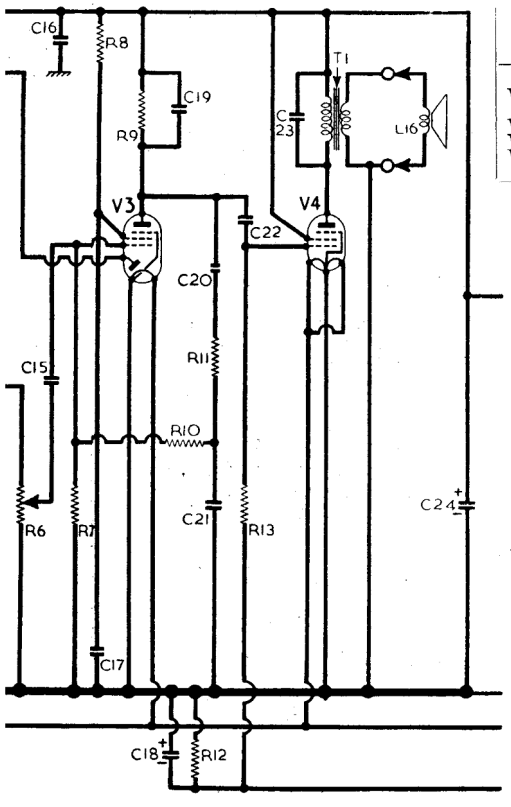
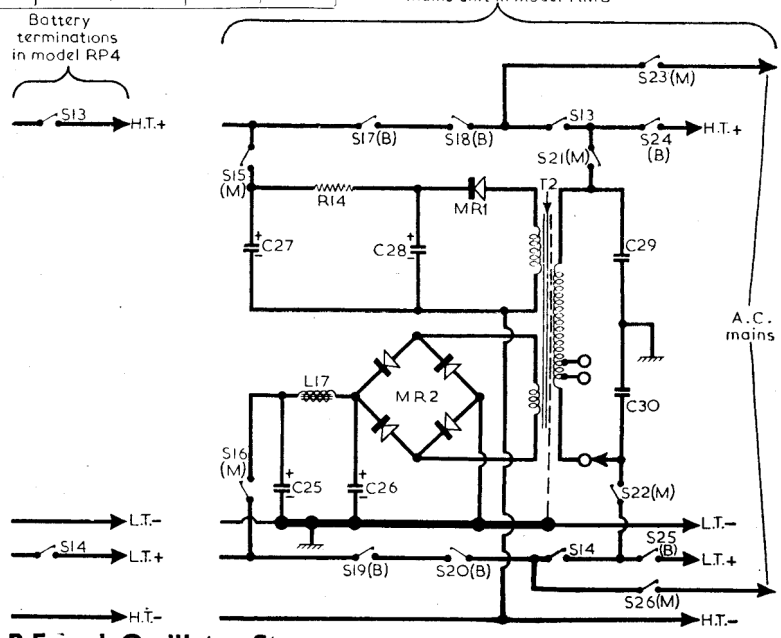




Valves	Anode		Screen	
	V	mA	V	mA
V1 DK92	85	0·44	44	0·1
	Oscillator			
	28	2·1		
V2 DF91	85	1·4	28	0·22
V3 DAF91	11	0·1	4	0·016
V4 DL94	81	6·5	85	1·5



CIRCUIT ALIGNMENT

To gain access to the I.F. core adjustments, the chassis should be removed from the carrying case.

I.F. Stages.—Switch receiver to M.W., turn gang to minimum and volume control to maximum. Connect output of signal generator via a 0.05 μF capacitor in each lead, to control grid (pin 6) of **V1** and chassis, feed in a 472 kc/s (635.6 m) signal and adjust the cores of **L15** (location reference B2), **L14** (E4), **L13** (B2) and **L12** (E4) in that order for maximum output. Repeat these adjustments until no further improvement results.

R.F. and Oscillator Stages

Home Model.—Check that with the gang at maximum capacitance the cursor coincides with the high wavelength end of the scales. Couple the signal generator output into the frame aerials by laying the leads close to the receiver.

M.W.—Switch receiver to M.W., tune to 550 m, feed in a 550 m (545.4 k/cs) signal and adjust the core of **L7** (A1) for maximum output. Adjust also inductance of M.W. frame aerial coil **L1** by spacing its turns for maximum output. Tune receiver to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust **C37** and **C32** (A1) for maximum output.

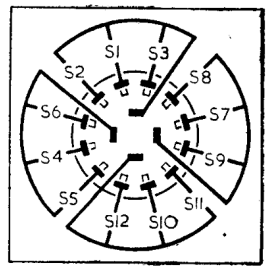
S.W.—Switch receiver to S.W., tune to 50 m, connect output leads of signal generator via a dummy aerial to **A** and **E** sockets and feed in a 50 m (6 Mc/s) signal. Adjust the cores of **L6** (A1) and **L4** (B1) for maximum output. Tune receiver to 20 m, feed in a 20 m (15 Mc/s) signal and adjust **C36** (A1) and **C31** (A1) for maximum output. Repeat these adjustments.

ROBERTS - RP4

	CAPACITORS	Values	Locations
C1	V1 C.G.	100pF	F4
C2	V1 S.G. decoupling	0·1μF	F4
C3	1st I.F. trans. tuning	65pF	B2
C4		65pF	B2
C5	V1 osc. C.G. ...	100pF	F4
C6	A.G.C decoup. ...	0·05μF	D4
C7	L.W. osc. trim. ...	95pF	F3
C8	S.W. osc. tracker...	0·005μF	E3
C9	M.W. osc. tracker	547pF	F3
C10	L.W. osc. tracker...	150pF	B1
C11	V1, V2 H.T. decoup.	0·05μF	F4
C12	2nd I.F. trans. tuning	65pF	B2
C13		65pF	B2
C14	I.F. by-pass ...	100pF	D4
C15	A.F. coupling ...	0·002μF	D4
C16	H.T. decoupling...	0·1μF	D4
C17	V3 S.G. decoup. ...	0·1μF	D4
C18*	V4 G.B. by-pass ...	20μF	D4
C19	I.F. by-pass ...	100pF	D3
C20	Neg. feed-back ...	10pF	D3
C21		100pF	D3
C22	A.F. coupling ...	0·01μF	D3
C23	Tone corrector ...	0·002μF	C2
C24*	H.T. decoupling ...	2μF	D4
C25*	L.T. smoothing §	2,500μF	D4
C26*		2,500μF	D4
C27*	H.T. smoothing §	40μF	D4
C28*		40μF	D4
C29	Mains R.F. filtering§	0·01μF	F4
C30		0·01μF	F4
C31‡	S.W. aerial trim. ...	80pF	F3
C32‡	M.W. aerial trim....	40pF	F3
C33‡	L.W. aerial trim.	40pF	F4
C34†	Aerial tuning ...	528pF	E3
C35†	Oscillator tuning...	528pF	E3
C36‡	S.W. osc. trim. ...	40pF	F3
C37‡	M.W. osc. trim. ...	80pF	F3
C38‡	L.W. osc. trim. ...	95pF	F4
C39‡	S.W.1 trim.¶ ...	—	—
C40‡	S.W.2 trim.¶ ...	—	—

*Electrolytic. †Variable. ‡Pre-set. §Model RMB only. ¶Export model only.

Diagram of the waveband switch unit, drawn as seen from below. Beneath it is the associated switch table.



L.W.—Switch receiver to L.W., disconnect signal generator leads from **A** and **E** sockets and lay them near the carrying case. Tune receiver to "Paris" on L.W. scale, feed in a 1,829 m (164 kc/s) signal and adjust the cores of **L8** (B1) and **L5** (A2) for maximum output. Tune to "Kalundborg" on scale, feed in a 1,224 m (245 kc/s) signal and adjust **C38** (A2) and **C33** (A2) for maximum output. Repeat these adjustments.

	RESISTORS	Values	Locations
R1	V1 C.G.	2·2MΩ	F4
R2	V1 S.G. feed ...	180kΩ	F3
R3	V1 osc. C.G. ...	27kΩ	F4
R4	H.T. feed	†27kΩ	F3
R5	A.G.C. decoupling	2·2MΩ	D4
R6	Volume control ...	1MΩ	D3
R7	V3 C.G.	4·7MΩ	D3
R8	V3 S.G. feed ...	4·7MΩ	D4
R9	V3 anode load ...	560kΩ	D3
R10	Neg. feed-back ...	2·2MΩ	D4
R11		2·2MΩ	D3
R12	V4 G.B.	390Ω	D3
R13	V4 C.G.	2·2MΩ	D3
R14§	H.T. smoothing ...	1·8kΩ	F4

§Model RMB only. †10kΩ in export models.

Export Model.—With the gang at maximum capacitance the cursor should coincide with the high wavelength ends of the tuning scales.

M.W.—Make the same adjustments as for the Home model.

S.W.2.—Switch receiver control to S.W.2 (which occupies the position in export models of the S.W. band in Home models) and tune to 70 m on scale. Connect signal generator output to **A** and **E** sockets, feed in a 70 m (4.287 Mc/s) signal and adjust the cores of the oscillator and aerial tuning coils for maximum output. Tune to 30 m on scale, feed in a 30 m (10 Mc/s) signal and adjust the oscillator and aerial capacitor trimmers for maximum output.

Switches	L.W.	S.W.	M.W.
S1	—	C	—
S2	—	—	C
S3	C	—	—
S4	—	C	—
S5	—	—	C
S6	C	—	—
S7	—	C	—
S8	—	—	C
S9	C	—	—
S10	—	C	—
S11	—	—	C
S12	C	—	—

S.W.1.—Switch receiver to S.W.1, tune to 35 m, feed in a 35 m (8.572 Mc/s) signal and adjust the cores of **L6** and **L20** for maximum output. Tune receiver to 11 m, feed in an 11 m (27.27 Mc/s) signal and adjust **C36** and **C39** for maximum output.

	OTHER COMPONENTS	Approx. Values (ohms)	Locations
L1	M.W. frame aerial	5·2	B1
L2	L.W. frame aerial	38·0	—
L3	S.W. aerial coil ...	—	F3
L4	S.W. tuning coil...	—	F3
L5	L.W. loading coil	6·0	F4
L6	Oscillator tuning coils	—	A1
L7		7·0	A1
L8		26.5	B1
L9	Oscillator reaction coils	—	A1
L10		1·5	A1
L11		4·5	B1
L12	1st I.F. trans.	Pri. 15·0	B2
L13		Sec. 15·0	B2
L14	2nd I.F. trans.	Pri. 15·0	B2
L15		Sec. 15·0	B2
L16	Speech coil ...	2·5	—
L17	L.T. choke ...	2·7	E4
L18*	Aerial coupling coils	—	—
L19*		—	—
L20*	Aerial tuning coils	—	—
L21*		—	—
T1	O.P. trans.	Pri. 500·0	—
		Sec. 0·5	C2
T2	Mains trans.	Pri, total 219·0	—
		H.T. sec. 118·0	F4
		Fil. sec. 0·3	—
S1-S12	Waveband switches	—	F3
S13-S14	Power sw., g'd R6	—	D3
S15-S26	Mains/battery sw.	—	E4

*Export model only.

Mains/Battery Switch

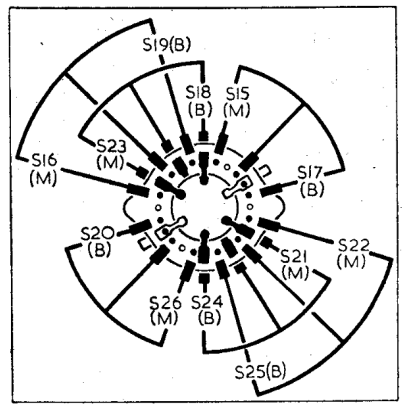


Diagram of the mains/battery changeover switch unit, drawn as seen from the front of the chassis, after removal from the carrying case. The suffixes (**B**) and (**M**) indicate that the switches close on battery and mains respectively.