

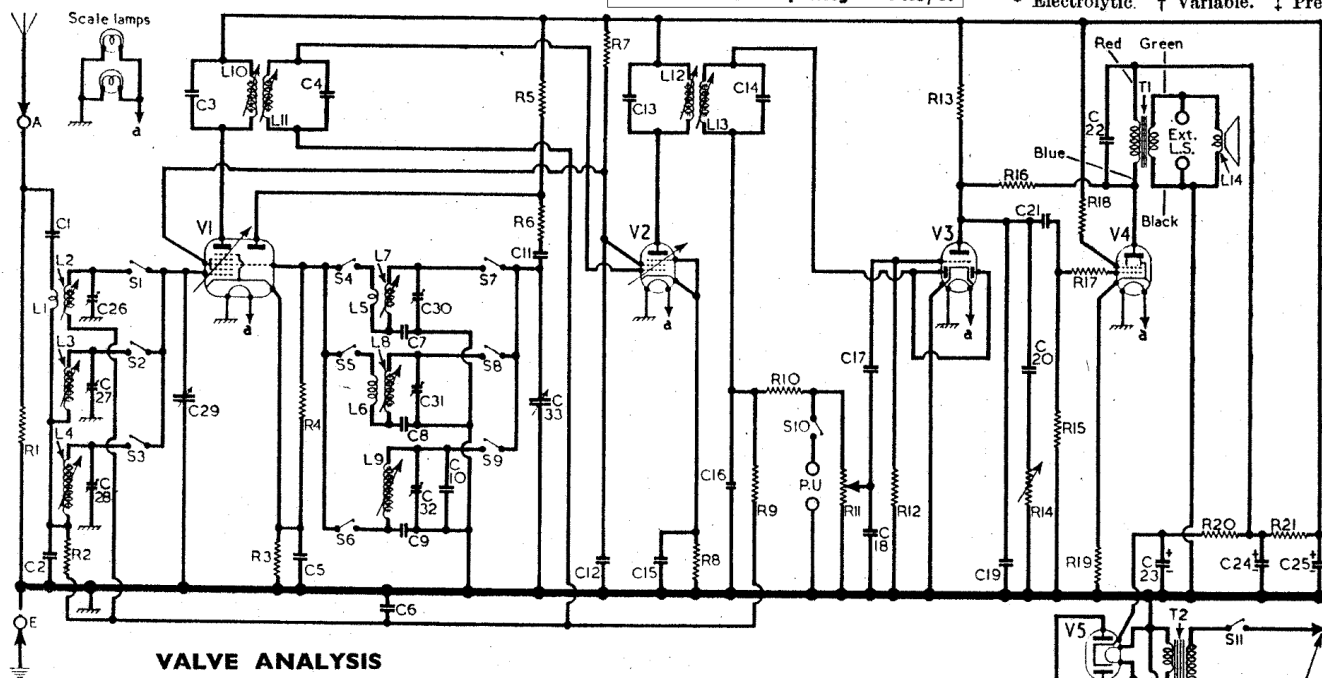
OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	S.W. coupling coil...	Very low	G3
L2	Aerial tuning coils	Very low	G3
L3		4-4	G3
L4		34-0	G4
L5	S.W. reaction coil	Very low	G3
L6	M.W. reaction coil	1-0	G3
L7	Oscillator tuning coils	Very low	G3
L8		5-0	G3
L9	1st I.F. trans	12-0	G4
L10		10-0	A2
L11	2nd I.F. trans	10-0	A2
L12		10-0	B2
L13	Speech coil	10-0	B2
L14		2-5	—
T1	Primary	240-0	—
	Secondary	0-5	—
T2	Primary	60-0	—
	H.T. sec., total	500-0	C2
	Htr secondary	0-1	—
S1-S10	Waveband switches	—	G3
S11	Mains sw., g'd R14	—	D8

RESISTORS		Values	Locations
R1	Aerial shunt	4-7kΩ	G4
R2	A.G.C. decoup.	10kΩ	G4
R3	V1 G.B.	220Ω	G4
R4	V1 osc. C.G.	47kΩ	G4
R5	Osc. anode feed	33kΩ	G4
R6	Stabilizer	47Ω	G4
R7	H.T. feed	33kΩ	F4
R8	V2 G.B.	330Ω	F4
R9	A.G.C. decoup.	2-2MΩ	F4
R10	I.F. stopper	56kΩ	F3
R11	Volume control	500kΩ	E3
R12	V3 C.G.	10MΩ	E4
R13	V3 anode load	220kΩ	E4
R14	Tone control	270kΩ	D3
R15	V4 C.G.	470kΩ	E4
R16	Neg. feed-back	470kΩ	E4
R17	V4 stoppers	47kΩ	E4
R18		100Ω	E4
R19	V4 G.B.	250Ω	D4
R20	H.T. smoothing	1kΩ	E3
R21		3-3kΩ	F3

CAPACITORS		Values	Locations
C1	Aerial series	0-002μF	G4
C2	Aerial coupling	0-0032μF	G4
C3	1st I.F. trans.	120pF	A2
C4		120pF	A2
C5	V1 cath. by-pass	0-1μF	G4
C6	A.G.C. decoupling	0-05μF	F4
C7	S.W. tracker	0-0025μF	G4
C8	M.W. tracker	410pF	G3
C9	L.W. tracker	150pF	G4
C10	L.W. trimmer	150pF	G3
C11	Osc. anode coup.	50pF	G4
C12	I.F. decoupling	0-1μF	F4
C13	2nd I.F. trans.	120pF	B2
C14		120pF	B2
C15	V2 cath. by-pass	0-1μF	F4
C16	I.F. by-pass	100pF	F3
C17	A.F. coupling	0-005μF	E3
C18	I.F. by-passes	100pF	E3
C19		400pF	E4
C20	Part tone control	0-01μF	E4
C21	A.F. coupling	0-01μF	E4
C22	Tone correction	0-01μF	E3
C23*	H.T. smoothing	16μF	B1
C24*		16μF	B1
C25*	S.W. aerial trim.	—	G3
C26†		—	G3
C27†	M.W. aerial trim.	—	G4
C28†	L.W. aerial trim.	—	G3
C29†	Aerial tuning	—	A1
C30†	S.W. osc. trimming	—	G3
C31†	M.W. osc. trimming	—	G3
C32†	L.W. osc. trimming	—	G4
C33†	Oscillator tuning	—	A2

Intermediate frequency 470 kc/s.

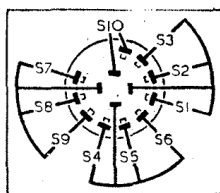
\* Electrolytic. † Variable. ‡ Pre-set.



## VALVE ANALYSIS

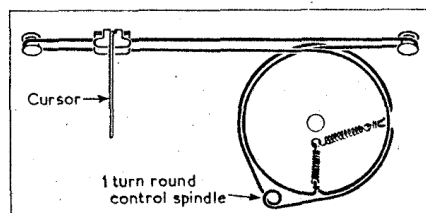
Valve	Anode		Screen		Cath.
	V	mA	V	mA	
V1 7S7 ...	175	1-9	70	2-2	1-5
	100	4-0			
V2 7B7 ...	175	7-5	70	2-0	2-0
	70	0-85			
V3 6Q7GT	225	43-0	180	3-0	9-0
V4 6V6GT	250†	—	—	—	280-0

† A.C., each anode.



Above. Diagram of the waveband switch unit, with the associated table below.

Switch	S.W.	M.W.	L.W.	Gram.
S1	○	—	—	○
S2	—	○	—	—
S3	—	—	○	—
S4	—	—	—	○
S5	—	—	—	—
S6	—	—	—	—
S7	○	—	—	—
S8	—	○	—	—
S9	—	—	○	—
S10	—	—	—	○



Sketch of the tuning drive system, as seen from front, showing both cords.

## CIRCUIT ALIGNMENT

**I.F. Stages.**—Switch set to M.W., turn gang to maximum and set tone and volume controls fully clockwise. Connect the output from the signal generator, via a 0.1μF capacitor in the "live" lead, to control grid (pin 6) of V2 and chassis. Feed in a 470 kc/s (638.3 m) signal and adjust the cores of L15, L12 (location reference B2) for maximum output. Transfer "live" signal generator lead to control grid (pin 6) of V1, and adjust the cores of L11, L10 (A2) for maximum output. Repeat these adjustments.

**R.F. and Oscillator Stages.**—Remove chassis from cabinet and check that with the gang at maximum capacitance, the cursor coincides with the highest wavelength ends of the tuning scales. Transfer the signal generator leads, via a suitable dummy aerial, to A and E sockets.

**L.W.**—Switch set to L.W., tune to 2,000 m, feed in a 2,000 m (150 kc/s) signal and adjust the cores of L9 (G4) and L4 (G4) for maximum output. Tune to 1,000 m, feed in a 1,000 m (300 kc/s) signal and adjust C32 (G4) and C28 (G4) for maximum output. Repeat these adjustments.

**M.W.**—Switch set to M.W., tune to 500 m, feed in a 500 m (600 kc/s) signal and adjust the cores of L8 (G3) and L3 (G3) for maximum output. Tune to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust C31 (G3) and C27 (G3) for maximum output. Repeat these adjustments.

**S.W.**—A dummy aerial consisting of a non-inductive 400 Ω resistor should be connected in series with the "live" signal generator lead. Switch set to S.W., tune to 50 m, feed in a 50 m (6 Mc/s) signal and adjust the cores of L7 (G3) and L2 (G3) for maximum output. Tune to 20 m, feed in a 20 m (15 Mc/s) signal and adjust C30 (G4) and C26 (G4) for maximum output, "rocking" the gang slightly while adjusting C26 to obtain optimum results. Repeat these adjustments.