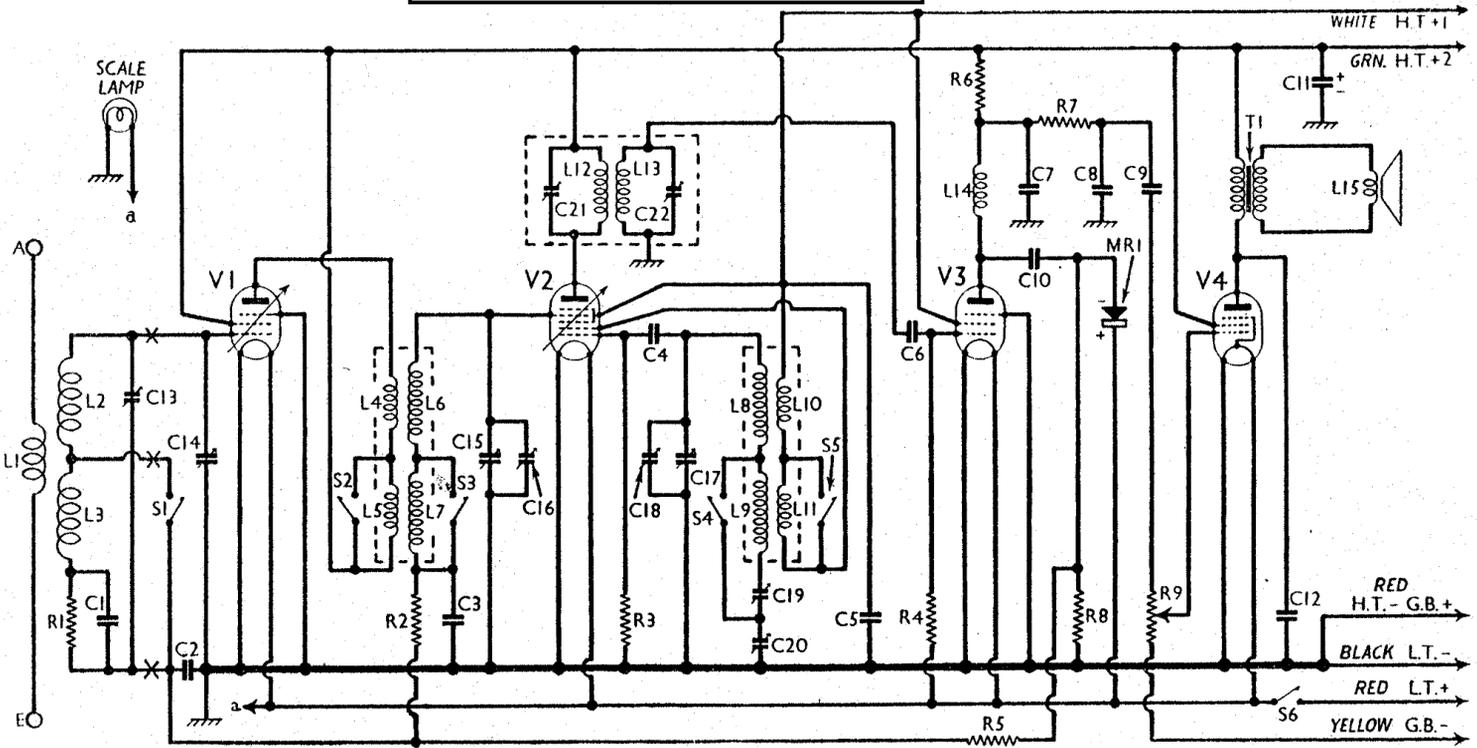


# BURNDEPT - 218



Circuit diagram of the Burndept 218 transportable battery superhet. The crosses on the diagram towards the left indicate the points where the frame aerial circuit connects to the chassis wiring.

## COMPONENTS AND VALUES

Resistances		Values (ohms)
R1	V1 C.G. decoupling	1,000
R2	V2 tetrode C.G. decoupling	250,000
R3	V2 oscillator C.G. resistance	100,000
R4	V3 grid leak	1,000,000
R5	A.V.C. line decoupling	1,000,000
R6	V3 anode load	100,000
R7	I.F. stopper	15,000
R8	Westector load resistance	1,000,000
R9	Manual volume control	500,000

Condensers (contd.)		Values ( $\mu$ F)
C17†	Oscillator tuning	—
C18‡	Oscillator trimmer	—
C19‡	Oscillator L.W. tracker	0.0015
C20‡	Oscillator M.W. tracker	0.002
C21‡	I.F. trans. pri. tuning	—
C22‡	I.F. trans. sec. tuning	—

\* Electrolytic † Variable ‡ Pre-set.

Condensers		Values ( $\mu$ F)
C1	V1 C.G. decoupling	0.01
C2	A.V.C. line decoupling	0.1
C3	V2 tetrode C.G. decoupling	0.1
C4	V2 oscillator C.G. condenser	0.001
C5	V2 S.G.'s and oscillator anode decoupling	0.1
C6	V3 C.G. condenser	0.0001
C7	I.F. by-passes	0.0002
C8		0.0001
C9	L.F. coupling to V4	0.01
C10	Coupling to Westector (MR1)	0.0005
C11*	H.T. reservoir	8.0
C12	Tone corrector	0.002
C13‡	Frame aerial trimmer	—
C14†	Frame aerial tuning	—
C15†	H.F. transformer tuning	—
C16‡	H.F. transformer trimmer	—

Other Components		Approx. Values (ohms)
L1	External aerial-earth coupling	0.4
L2	Frame aerial	0.9
L3		5.5
L4	H.F. transformer primary	4.2
L5		4.0
L6	H.F. transformer secondary	5.0
L7		9.0
L8	Oscillator tuning coils	4.5
L9		6.5
L10	Oscillator anode coils	1.0
L11		4.0
L12	I.F. transformer { Pri. ...	27.0
L13		27.0
L14	V3 anode I.F. choke	170.0
L15	Speaker speech coil	2.5
T1	Speaker input trans. { Pri. ...	700.0
	{ Sec. ...	0.4
MR1	A.V.C. Westector	—
S1-S5	Waveband switches	—
S6	L.T. switch, ganged R9	—

**Scale Lamp.**—This is a 2 V Competa M.E.S. pattern, of the low consumption type.

## VALVE ANALYSIS

Voltages and currents for the various valves in the receiver given in the table below are those measured in our set when it was operating from a new H.T. battery reading 126 V. The volume control was at maximum, and the set was tuned to the lowest wavelength on the medium band. There was no signal input, the frame connections being shorted together.

Voltages were measured on the 1,200 V scale of an Avometer, with chassis as negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 VP2	120	2.3	120	0.6
V2 X21*	120	0.5	60	1.4
V3 SP2	38	0.7	60	0.2
V4 PM22A	118	3.5	120	0.8

\* Osc. anode (G2) 60 V, 1.5 mA.

## GENERAL NOTES

**Switches.**—The spindle of the wave-change switch unit projects from the right of the chassis. It contains **S1** to **S5**, and all the switches are *closed* on the M.W. band and *open* on the L.W. band. Note that one set of contacts, between **S1** and **S4**, is not used, the switch being shorted out by the wire from **C20** to the **V1** holder, and earthed.

**S6** is the Q.M.B. L.T. switch, ganged with the volume control **R9**.

**Coils.**—Apart from the frame aerial and external aerial coupling coils (**L1-L3**), all the coils are in three screened units on the chassis deck. The units are **L4-L7**, the H.F. transformer; **L8-L11**, the oscillator unit; and **L12, L13**, the I.F. transformer, with its trimmers **C21, C22**. **L14** is an I.F. choke, mounted beneath the chassis.