



COMPONENTS AND VALUES

RESISTANCES		Values (ohms)
R1	V1 fixed GB resistance ..	5,000
R2	V1 gain control ..	50,000
R3	V1 anode HT feed ..	3,000
R4	V2 CG resistance ..	1,000,000
R5	V3 CG RF stopper ..	250,000

CONDENSERS		Values (μF)
C1	Aerial series condenser ..	0.0002
C2	V1 CG decoupling ..	0.1
C3	Droitwich rejector tuning ..	0.00015
C4	V1 SG and V2 anode RF by-pass ..	0.1
C5	V1 anode decoupling ..	0.1
C6	V2 CG condenser ..	0.00015
C7	V2 anode RF by-pass ..	0.0002
C8	Fixed tone corrector ..	0.005
C9†	Aerial circuit tuning ..	0.00054
C10†	Aerial circuit MW trimmer ..	—
C11†	Reaction control ..	0.0005
C12†	V1 anode circuit tuning ..	0.00054
C13†	V1 anode circuit MW trimmer ..	—

† Variable.

‡ Pre-set.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial coupling coil ..	11.0
L2	Aerial circuit MW tuning coil ..	2.5
L3	Aerial circuit LW tuning coil ..	10.0
L4	Droitwich rejector circuit coil ..	18.25
L5	Reaction coil ..	1.6
L6	V1 anode circuit MW tuning coil ..	2.5
L7	V1 anode circuit LW tuning coil ..	10.0
L8	Speaker speech coil ..	2.5
T1	Intervalve trans. } Pri. ..	1,200.0
	Sec. ..	2,700.0
T2	Output trans. } Pri. ..	550.0
	Sec. ..	0.15
S1, S2	Waveband switches ..	—
S3	GB circuit switch ..	—
S4	LT circuit switch ..	—

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating with an HT battery reading 120 V, on load. The receiver was tuned to the lowest wavelength on the medium band and the volume control was at maximum, but the reaction control was at minimum. There was no signal input.

Voltages were measured on the 400 V scale of a model 7 Universal Avometer, chassis being negative.

If, as in our case, **V1** should become unstable when its screen current is being measured, it can be stabilised by connecting a non-inductive condenser of about 0.1 μF from grid (top cap) to chassis.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VP2B	110	3.0	60	1.4
V2 PM2HL	59	0.6	—	—
V3 PM22A	117	3.3	120	0.6

GENERAL NOTES

Switches.—**S1**, **S2** are the waveband switches, and **S3**, **S4** the battery circuit switches, ganged in a single unit beneath the chassis, and identified in our under-chassis view. In the "off" position, **S3** and **S4** are open, and in the MW and LW positions they are closed. On MW, **S1** and **S2** are closed, and on LW they are open.

Coils.—**L1-L3** and **L5-L7** are in two unscreened units beneath the chassis. **L4** is on a separate former, close to the **L1-L3** unit.

Scale Lamp.—This is an Ever Ready MES type, rated at 2.5 V, 0.2 A.

External Speaker.—Sockets are provided at the rear of the chassis for a low resistance (about 3 Ω) external speaker.

Batteries.—LT, 2 V 20 AH or larger accumulator cell. HT, 120 V or 150 V dry HT battery. GB, 9 V dry GB battery.

CIRCUIT ALIGNMENT

With gang at maximum, pointer should be horizontal.

Connect signal generator to **A1** and **E** sockets, feed in a 250 m (1,200 KC/S) signal, switch set to MW, and tune to 250 m on scale. With reaction condenser **C11** at minimum, adjust **C10** for maximum output.

Reduce output from signal generator and increase reaction until set is just short of oscillation, then adjust **C13** for maximum output.

Check at 550 m and on LW.