



## COMPONENTS AND VALUES

RESISTANCES		Values (ohms)
R1	A2 series resistance	100,000
R2	V1 CG decoupling	250,000
R3	V1 fixed GB resistance	1,000
R4	V1 gain control	10,000
R5	V2 grid leak	2,000,000
R6	V2 anode load	25,000
R7	V3 CG RF stopper	500,000

CONDENSERS		Values (μF)
C1	Band-pass bottom coupling	0.02
C2	Band-pass top coupling	Very low
C3	HT circuit RF by-pass	0.1
C4	V2 anode RF by-pass (MW and LW only)	0.0005
C5	V2 CG condenser	0.0001
C6	AF coupling to Tr	0.02
C7*	HT circuit reservoir	2.0
C8	Fixed tone corrector	0.003
C9†	Band-pass primary tuning	0.0005
C10†	Band-pass pri. MW trimmer	—
C11†	SW aerial and band-pass secondary tuning	0.0005
C12†	Band-pass sec. MW trimmer	—
C13†	Reaction control	—
C14†	V1 anode circuit tuning	0.0005
C15†	V1 anode circuit MW trimmer	—

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

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial MW and LW coupling	10.0
L2	Band-pass primary coils	3.2
L3	Band-pass secondary coils	11.5
L4	Aerial SW coupling coil	0.1
L5	Aerial SW tuning coil	0.05
L6	Band-pass primary coils	3.2
L7	Band-pass secondary coils	11.5
L8	SW reaction coil	0.15
L9	MW and LW reaction coil	3.4
L10	V1 anode SW tuning coil	0.05
L11	V1 anode MW tuning coil	3.2
L12	V1 anode LW tuning coil	11.5
L13	V2 anode RF choke	200.0
L14	Speaker speech coil	3.5
T1	Intervalve auto-trans., total	7000.0
T2	Speaker input trans. { Pri. 900.0 Sec. 0.9	
S1-S17	Waveband switches	—
S18	HT circuit switch	—
S19	LT circuit switch	—
S20	GB circuit switch	—
F1	HT +2 circuit fuse	—

## 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 125 V overall, 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.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VP2	115	1.3	115	0.4
V2 PM2HL	50	0.7	—	—
V3 PM22A	113	2.5	115	0.4

## GENERAL NOTES

**Switches.**—S1-S17 are the waveband switches, in two rotary units beneath the chassis. These are indicated in our under-chassis view, and shown in detail in the diagrams on page iv. The table (page iv) gives the switch positions for the three control settings, starting from fully anti-clockwise. A dash indicates open, and C closed.

**S18-S20** are the QMB battery circuit switches, ganged with the gain control, R4. Their contacts are indicated in our under-chassis view.

**Coils.**—L1-L3; L4, L5; L6, L7 and L8, L10 are in four unscreened units beneath the chassis. In the case of the last unit, L10 is the thick wire winding. L9, L11, L12 are in a screened unit on the chassis deck. The RF choke L13 is beneath the chassis.

**Fuse F1.**—This is an MES type, rated at 2.5 V. It screws into a holder mounted flush with the chassis deck.

**External Speaker.**—Two sockets are provided at the rear of the cabinet for a low impedance (2.5 Ω) external speaker. A plug and socket device permits the internal speaker speech coil to be disconnected, thus muting the internal speaker.

## CIRCUIT ALIGNMENT

With gang at maximum, pointer should coincide with right hand vertical line on the scale.

Switch set to MW, tune to 214 m (dot on scale), and turn gain control to maximum. Connect signal generator to A1 and E sockets, feed in a 214 m (1,400 KC/S) signal, and adjust C15, C12 and C10 for maximum output. Keep reaction control advanced to a point just short of oscillation.

## TABLE AND DIAGRAMS

SWITCH	LW	MW	SW
S1	—	—	C
S2	—	C	C
S3	—	C	—
S4	C	—	—
S5	—	—	C
S6	—	C	C
S7	—	—	C
S8	—	C	—
S9	C	—	—
S10	—	—	C
S11	C	C	—
S12	C	C	—
S13	—	—	C
S14	—	C	C
S15	—	—	C
S16	—	C	—
S17	C	—	—

Diagrams of the switch units, as seen from the rear of the under-side of the chassis.

