

COMPONENTS AND VALUES

RESISTANCES		Values (ohms)
R1	V1 G.B. minimum limit resistance	20,000
R2	V1 gain control	600,000
R3	V1 S.G. and anode H.T. feed	10,000
R4	V1 grid leak	3,000,000
R5	V2 G.B. filament potentiometer	100
R6	V2 anode load resistance	1,000
R7	Parts of V2 anode R.F. filter	100,000
R8		10,000
R9		50,000
R10	V3 C.G. resistance	300,000
R11	V3 C.G. R.F. stopper	100,000
R12	V3 automatic G.B. resistance	500

CONDENSERS		Values (μF)
C1	V1 C.G. decoupling and R.F. by-pass	0.1
C2	V1 by-pass condensers	0.01
C3	V1 S.G. and anode R.F. by-pass	0.01
C4*	V1 S.G. and anode decoupling	4.0
C5	V2 C.G. condenser	0.00005
C6	V2 S.G. decoupling	0.1
C7	Parts of V2 anode R.F. filter	0.0003
C8		0.0003
C9	V2 to V3 A.F. coupling	0.02
C10*	Automatic G.B. circuit by-pass	50.0
C11*	H.T. reservoir condenser	8.0
C12	V3 anode fixed tone corrector	0.006
C13†	Aerial circuit S.W. trimmer	—
C14†	Aerial circuit M.W. trimmer	—
C15†	Aerial circuit L.W. trimmer	—
C16†	Aerial circuit tuning	—
C17†	Anode circuit S.W. trimmer	—
C18†	Anode circuit M.W. trimmer	—
C19†	Anode circuit L.W. trimmer	—
C20†	Reaction control	0.0005
C21†	Anode circuit tuning	—

* Electrolytic. † Variable. ‡ Pre-set.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial S.W. coupling	0.3
L2	Aerial M.W. coupling	14.0
L3	Aerial L.W. coupling	73.0
L4	Aerial S.W. tuning coil	Very low
L5	Aerial M.W. tuning coil	5.0
L6	Aerial L.W. tuning coil	17.0
L7	S.W. reaction coil	0.5
L8	M.W. reaction coil	0.4
L9	L.W. reaction coil	4.0
L10	V1 anode S.W. tuning coil	0.1
L11	V1 anode M.W. tuning coil	3.2
L12	V1 anode L.W. tuning coil	26.0
L13	Speaker speech coil	1.8
T1	Speaker input trans.	650.0
Sr-Sr8	Waveband switches	0.2
Sr9	L.T. 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 H.T. battery reading 123 V on load, and with the H.T. +1 plug in the 60 V socket.

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 1,200 V scale of an Avometer, chassis being negative.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VP2B	100	1.3	100	0.4
V2 SP2	55	0.4	60	0.1
V3 PM22D	120	2.7	123	0.4

GENERAL NOTES

Switches.—S1-S18 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 this page. Note that the first unit is viewed from the front of the chassis, and the second from the rear.

The table below gives the switch

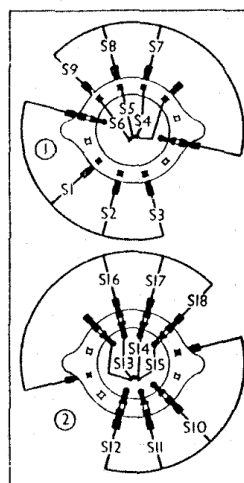
Switch	L.W.	M.W.	S.W.
S1	—	—	C
S2	—	C	—
S3	C	—	—
S4	C	C	—
S5	C	—	C
S6	—	C	C
S7	—	—	C
S8	—	C	—
S9	C	—	C
S10	—	—	C
S11	—	C	—
S12	C	—	—
S13	C	C	—
S14	C	—	C
S15	—	C	C
S16	—	—	C
S17	—	C	—
S18	C	—	—

positions for the three control settings, starting from fully anti-clockwise. A dash indicates open, and C, closed.

S19 is the Q.M.B. L.T. circuit switch, ganged with the gain control **R2**.

S19 is the Q.M.B. L.T. circuit switch, ganged with the gain control **R2**.

Coils.—All the coils are included in pairs in six unscreened units, wound on tubular formers beneath the chassis. These are indicated in our under-chassis



Switch diagrams, looking in the directions of the arrows in the under-chassis view.

CIRCUIT ALIGNMENT

When the gang is at maximum the pointer should cover the right-hand horizontal lines on the scale plate.

Connect a signal generator to **A** and **E** sockets or leads. Turn volume control to maximum, and reaction control to a point just short of oscillation. Switch set to L.W., tune to 1,200 m. on scale, feed in a 1,200 m. (250 KC/S) signal, and adjust **C19** and **C15** for maximum output, keeping set just short of oscillation.

Switch set to M.W., tune to 220 m. on scale, feed in a 220 m. (1,360 KC/S) signal, and adjust **C18** and **C14** for maximum output, keeping set just short of oscillation.

Switch set to S.W., tune to 20 m. on scale, feed in a 20 m. (15 MC/S) signal, and adjust **C17** and **C13** for maximum output, again keeping set just short of oscillation.