



RESISTANCES		Values (ohms)
R1	V1 pentode CG stabiliser ..	47
R2	V1 fixed GB resistance ..	150
R3	V1 osc. CG resistance ..	22,000
R4	Osc. SW1 reaction stabiliser ..	47
R5	V1 osc. anode HT feed ..	22,000
R6	V1, V2 SG's HT feed ..	22,000
R7	V2 fixed GB resistance ..	330
R8	IF stopper ..	60,000
R9	Part of tone compensator ..	60,000
R10	Manual volume control ..	1,000,000*
R11	V3 pentode CG stopper ..	100,000
R12	V3 signal diode load ..	500,000
R13	V3 pent. GB and AVC delay ..	150
R14	potential divider resistances ..	330
R15	AVC line decoupling ..	1,000,000
R16	V3 AVC diode load ..	1,000,000
R17	Part of tone control ..	3,300

* Centre-tapped.

CONDENSERS (Continued)		Values (μF)
C18	IF by-pass condensers ..	0.00015
C19	IF by-pass condensers ..	0.00015
C20	Part of tone compensator ..	0.005
C21	AF coupling to V3 pentode ..	0.005
C22	Coupling to V3 AVC diode ..	0.00002
C23*	V3 cathode by-pass ..	20.0
C24	Part of tone control ..	0.05
C25*	HT smoothing condensers ..	8.0
C26*	HT smoothing condensers ..	8.0
C27	Mains aerial coupling ..	0.001
C28†	Aerial circuit SW1 trimmer ..	0.00003
C29†	Aerial circuit MW trimmer ..	0.00003
C30†	Aerial circuit tuning ..	0.000554
C31†	Osc. circuit MW trimmer ..	0.00003
C32†	Osc. circuit LW trimmer ..	0.00003
C33†	Oscillator circuit tuning ..	0.000554

* Electrolytic. † Variable. ‡ Pre-set.

CONDENSERS		Values (μF)
C1	Part of MW aerial coupling ..	0.000006
C2	V1 pentode CG decoupling ..	0.1
C3	1st IF transformer fixed ..	0.0001
C4	tuning condensers ..	0.0001
C5	V1 cathode by-pass ..	0.1
C6	Gram PU shunt ..	0.00015
C7	V1 osc. CG condenser ..	0.00015
C8	Osc. circuit MW fixed trimmer ..	0.00002
C9	Osc. circuit LW fixed trimmer ..	0.00026
C10	Osc. circuit SW1 tracker ..	0.005
C11	Osc. circuit SW2 tracker ..	0.0013
C12	Osc. circuit MW and LW tracker ..	0.000657
C13	V1 osc. anode coupling ..	0.01
C14	V1, V2 SG's decoupling ..	0.1
C15	2nd IF transformer fixed ..	0.0001
C16	tuning condensers ..	0.0001
C17	V2 cathode by-pass ..	0.1

OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial SW1 coupling coil ..	0.3
L2	Aerial SW2 coupling coil ..	1.8
L3	Aerial MW and LW coupling ..	65.0
L4	Aerial SW1 tuning coil ..	Very low
L5	Aerial SW2 tuning coil ..	0.3
L6	Aerial MW tuning coil ..	3.6
L7	Aerial LW tuning coil ..	13.3
L8	Oscillator SW1 reaction ..	50.0
L9	Oscillator SW2 reaction ..	85.0
L10	Oscillator MW reaction ..	10.0
L11	Oscillator LW reaction ..	12.0
L12	Osc. circuit SW1 tuning coil ..	Very low
L13	Osc. circuit SW2 tuning coil ..	0.4
L14	Osc. circuit MW tuning coil ..	2.0
L15	Osc. circuit LW tuning coil ..	2.8
L16	1st IF trans. { Pri. ..	7.0
L17	1st IF trans. { Sec. ..	7.0
L18	2nd IF trans. { Pri. ..	9.5
L19	2nd IF trans. { Sec. ..	9.5
L20	Speaker speech coil ..	1.8
L21	Hum neutralising coil ..	0.15
L22	Speaker field coil ..	2,000.0
T1	Output trans. { Pri. ..	310.0
	trans. { Sec. ..	0.15
	trans. { Pri., total ..	24.0
T2	Mains trans. { Heater sec., total ..	0.15
	trans. { Rect. heat. sec., total ..	0.1
	trans. { HT sec., total ..	730.0
S1-S15	Waveband switches ..	—
S16-S24	Gram pick-up switches ..	—
S25-S27	Tone control switches ..	—
S28	Mains switch, ganged R10 ..	—

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating on mains of 235 V using the 216-235 V tapping on the mains transformer. The receiver was tuned to the lowest wavelength on the MW band, and the volume control was at maximum, but 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 ECH2 ..	254	2.7	75	7.0
V2 EF9 ..	254	4.9	75	1.5
V3 EBL1 ..	243	35.0	254	4.4
V4 AZ1 ..	375†	—	—	—

† Each anode, AC.

Switch	Gram	SW1	SW2	MW	LW
S1	—	C	—	—	—
S2	—	—	C	—	—
S3	—	—	—	C	—
S4	C	—	—	—	—
S5	—	C	—	—	—
S6	—	—	C	—	—
S7	—	—	—	C	—
S8	—	C	—	—	—
S9	—	—	C	—	—
S10	—	—	—	C	—
S11	—	—	—	—	C
S12	C	—	—	—	—
S13	—	C	—	—	—
S14	—	—	C	—	—
S15	—	—	—	C	—
S16	C	—	—	—	—
S17	—	—	C	—	—
S18	—	—	—	C	—
S19	C	—	—	—	—
S20	—	C	—	—	—
S21	—	—	C	—	—
S22	—	—	—	C	—
S23	—	—	—	—	C
S24	—	—	—	—	—
S25	C	—	—	—	—

Diagrams of the wave-change and pick-up switch units

