



COMPONENTS AND VALUES

RESISTANCES	Values (ohms)
R1 V1 CG decoupling	100,000
R2 V2 pentode CG decoupling	100,000
R3 V2 SG HT feed	25,000
R4 V2 osc. CG resistance	50,000
R5 Osc. circuit SW damping	6,000
R6 V2 osc. anode HT feed	25,000
R7 V2 CG decoupling	1,000,000
R8 V4 signal diode load resistance	120,000
R9 V4 V2 decoupling	120,000
R10 V4 V2 diode load resistance	250,000
R11 V4 V2 decoupling	250,000
R12 V1, V2 and V3 HT feed	1,000
R13 IF stopper	200,000
R14 AVC line decoupling	250,000
R15 Manual volume control	500,000
R16 V5 CG decoupling	250,000
R17 Variable tone control	500,000
R18 V5 anode load resistance	50,000
R19 V6 CG resistance	500,000
R20 V6 grid stopper	50,000
R21 V6 GB resistance	150
R22 Negative feed-back feed resistance	50
R23 V1, V2, V3 fixed GB, V5	15
R24 V5 GB and AVC delay resistance	30
R25 T.L. anode HT feed	30
R26 T.L. anode HT feed	2,000,000
R27 T.L. CG decoupling	2,500,000

VALVE ANALYSIS

Valve voltages and currents given in the table (col. 3) are those measured in our receiver when it was operating on mains of 230 V, using the 230 V tapping of the mains transformer. The "Manual" button was depressed, the receiver was tuned to the lowest wavelength on the medium 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 VP4B	220	5.7	220	2.0
V2 TH4B	220	5.1	85	5.3
V3 VP4B	85	5.4	220	3.4
V4 2D4	220	9.2	—	—
V5 TDD4	154	1.9	—	—
V6 PenA4	225	38.0	252	5.9
V7 LW4/350	350†	—	—	—
T.L. TV4	18	0.13	Target	0.48

† Each anode, A.C.

CONDENSERS	Values (μF)
C1 Alternative aerial series	0.00005
C2 V1 CG decoupling	0.05
C3 Aerial LW fixed trimmer	0.000067
C4 HT circuit RF by-pass	0.05
C5 AVC line decoupling	0.05
C6 V2 pentode CG decoupling	0.05
C7 V2 LW sec. fixed trimmer	0.000067
C8 V2 SG decoupling	0.05
C9 1st IF transformer fixed tuning condensers	0.00015
C10 Osc. circuit LW fixed trimmer	0.000145
C11 Osc. circuit SW tracker	0.000395
C12 Osc. circuit MW fixed tracker	0.000215
C13 Osc. circuit LW fixed tracker	0.000215
C14 V2 osc. anode coupling	0.05
C15 V3 CG decoupling	0.05
C16 V3 HT circuit RF by-pass	0.05
C17 1st IF transformer fixed tuning condensers	0.00015
C18 Coupling to V4 AVC diode	0.000125
C19 V1, V2, V3 anodes decoupling	0.00005
C20 V1, V2, V3 fixed GB, V5	0.01
C21 V5 CG decoupling	0.05
C22 Part of variable tone control	0.0004
C23 V5 to V6 AF coupling	0.01
C24 V6 cathode by-pass	25.0
C25 Fixed tone corrector	0.005
C26 HT smoothing condensers	8.0
C27 Speaker field shunt	1.0
C28 V7 cathode RF by-pass	0.0002
C29 Mains RF by-pass	0.01
C30 Mains aerial coupling	0.0005
C31 Auto GB circuit by-pass	50.0
C32 T.L. CG decoupling	0.03
C33 Tuning motor by-pass condensers	0.02
C34 Aerial circuit SW trimmer	0.02
C35 Aerial circuit MW trimmer	0.00003
C36 Aerial circuit LW trimmer	0.00003
C37 Aerial circuit tuning	0.00003
C38 RF trans. sec. SW trimmer	0.00003
C39 RF trans. sec. MW trimmer	0.00003
C40 RF trans. sec. LW trimmer	0.00003
C41 RF trans. sec. tuning	0.00003
C42 Oscillator circuit tuning	—
C43 Osc. circuit MW trimmer	0.00003
C44 Osc. circuit LW trimmer	0.00003
C45 Osc. circuit MW tracker	0.00003
C46 Osc. circuit LW tracker	0.00003

* Electrolytic. † Variable. ‡ Pre-set.

GENERAL NOTES

Switches.—S1-S52 are all ganged in nine rotary units beneath the chassis, the units being indicated in the under-chassis view, and shown in detail in the diagrams in col. 6. The arrows in the under-chassis view show the directions in which the units are to be viewed. The table (col. 5) gives the switch positions for the four control settings, starting from fully anti-clockwise. A dash indicates open, and C, closed.

S53 is the receiver muting switch, mounted on the tuning motor, and indicated in our plan chassis view. It is operated by a sliding movement of the motor spindle and is closed while the motor is running.

S54 is the internal speaker switch, associated with the external speaker sockets at the rear of the cabinet. When the special plug is inserted and rotated anti-

OTHER COMPONENTS	Approx. Values (ohms)
L1 Aerial SW coupling coil	0.2
L2 Aerial MW coupling coil	20.0
L3 Aerial LW coupling coil	99.0
L4 Aerial SW tuning coil	0.3
L5 Aerial MW tuning coil	5.6
L6 Aerial LW tuning coil	13.0
L7 RF trans. SW pri. coil	0.3
L8 RF trans. MW pri. coil	1.4
L9 RF trans. LW pri. coil	6.6
L10 RF trans. SW sec. coil	0.1
L11 RF trans. MW sec. coil	5.5
L12 RF trans. LW sec. coil	13.0
L13 Osc. circuit SW tuning coil	0.05
L14 Osc. circuit MW tuning coil	2.3
L15 Osc. circuit LW tuning coil	4.4
L16 Oscillator SW reaction	16.25
L17 1st IF trans. Sec.	12.0
L18 2nd IF trans. Pri.	12.0
L19 2nd IF trans. Sec.	12.0
L20 Speaker speech coil	2.5
L21 Speaker field coil	1,000.0
L22 HT smoothing choke	530.0
L23 Output trans. Pri.	700.0
T1	0.3
T2	23.0
Mains	0.05
Rect. heat. sec.	0.1
HT sec., total	470.0
Motor sec., total	1.0
Between either selector disc and chassis	6.3
Waveband switches	—
Radio/gram change switches	—
Feed-back control switches	—
Waveband indicator switches	—
Receiver tuning switches	—
S51 Internal speaker switch	—
S52 Mains switch, ganged R15	—
S53 Manual auto change switches	—
S54 MW auto selector switches	—
S55 LW auto selector switches	—
S56-57	—
S58-59	—
S60-61	—
S62-63	—
S64-65	—
S66-67	—
S68-69	—
S70-71	—
S72-73	—
S74-75	—
S76-77	—
S78-79	—
S80-81	—
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