



## COMPONENTS AND VALUES

CONDENSERS	Values (μF)
C1 Aerial IF filter tuning	0.00006
C2 Aerial series condenser	0.00043
C3 LW aerial 261 m rejector tuning	0.000012
C4 V1 hexode CG condenser	0.0001
C5 V1 hexode CG decoupling	0.02
C6 V1 cathode by-pass	0.1
C7 V1 osc. CG condenser	0.00006
C8 Osc. circuit SW tracker	0.0005
C9 Osc. circuit MW fixed tracker	0.0003
C10 Osc. circuit MW fixed trimmer	0.000012
C11 Osc. circuit LW fixed trimmer	0.00006
C12 Part of SW reaction equaliser	0.000025
C13 V1 osc. anode coupling	0.002
C14 V2 CG decoupling	0.1
C15 V1, V2 SG's decoupling	0.1
C16 V2 cathode by-pass	0.1
C17 IF by-pass condensers	0.0001
C18 AF coupling to V3 triode	0.0001
C19 V3 triode anode decoupling	0.02
C20* Coupling to V3 AVC diode	4.0
C21 V3 cathode by-pass	0.0001
C22 V3 triode to V4 AF coupling	50.0
C23 V4 cathode by-pass	0.01
C24* Fixed tone corrector	50.0
C25 Part of variable tone control	0.006
C26 HT smoothing condensers	0.05
C27* Mains RF by-pass	10.0
C28 Aerial circuit SW trimmer	10.0
C29 Aerial circuit MW trimmer	0.006
C30 Aerial circuit LW trimmer	—
C31 Aerial circuit tuning	—
C32 Oscillators circuit tuning	—
C33 Osc. circuit MW tracker	—
C34 Osc. circuit LW tracker	—
C35 Osc. circuit SW trimmer	—
C36 Osc. circuit MW trimmer	—
C37 Osc. circuit LW trimmer	—
C38 1st IF trans. pri. tuning	—
C39 1st IF trans. sec. tuning	—
C40 2nd IF trans. pri. tuning	—
C41 2nd IF trans. sec. tuning	—
C42 2nd IF trans. sec. tuning	—

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

## CIRCUIT ALIGNMENT

**IF Stages.**—Connect signal generator to control grid (top cap) of V1, via a 0.1 μF condenser, and chassis. Short-circuit C34, switch set to MW and turn volume control to maximum. Feed in a 465 KC/S signal, and adjust C40, C41, C42 and C43 for maximum output. Check these settings, then remove short circuit from C34.

**IF Filter.**—If this should need adjustment, connect signal generator to A and E sockets, switch set to LW, tune to bottom of band, and feed in a 465 KC/S signal. Adjust core of L1 for minimum output.

**RF and Oscillator Stages.**—With gang at maximum, scale pointer should be vertical. Connect signal generator, via a suitable dummy aerial, to A and E sockets. Turn receiver volume control to maximum.

**LW.**—Switch set to LW, tune to 1,200 m on scale, feed in a 1,200 m (250 KC/S) signal, and adjust C39, then C32, for maximum output. With sets using variable trackers, feed in a 1,800 m (166.7 KC/S) signal, tune it in, and adjust C36 for maximum output, while rocking the gang for optimum results. Return to 1,200 m, and re-adjust C39 and C32, if necessary.

RESISTANCES	Values (ohms)
R1 V1 hexode CG resistance	500,000
R2 V1 hexode CG decoupling	500,000
R3 V1 CG stabiliser	40
R4 V1 fixed GB resistance	300
R5 V1 osc. CG resistance	50,000
R6 V1 osc. anode HT feed	35,000
R7 V2 CG decoupling	500,000
R8 V1, V2 SG's HT feed	35,000
R9 V2 fixed GB resistance	300
R10 IF stopper	70,000
R11 V3 signal diode load	300,000
R12 Manual volume control	500,000
R13 V3 triode GB: AVC delay	3,000
R14 V3 triode anode decoupling	25,000
R15 V3 triode anode load	100,000
R16 V3 AVC diode load	500,000
R17 V4 CG resistance	250,000
R18 V4 GB resistance	250
R19 V4 anode stabiliser	100
R20 Variable tone control	50,000

OTHER COMPONENTS	Approx. Values (ohms)
L1 Aerial IF filter coil	8.5
L2 LW aerial 261 m rejector coil	5.5
L3 Aerial SW coupling coil	0.2
L4 Aerial MW coupling coil	14.0
L5 Aerial LW coupling coil	75.0
L6 Aerial SW tuning coil	Very low
L7 Aerial MW tuning coil	4.0
L8 Aerial LW tuning coil	17.0
L9 Osc. circuit SW tuning coil	Very low
L10 Osc. circuit MW tuning coil	2.5
L11 Osc. circuit LW tuning coil	5.0
L12 Oscillator SW reaction	0.5
L13 Oscillator MW reaction	0.7
L14 Oscillator LW reaction	7.5
L15 Osc. SW reaction equaliser	2.5
L16 1st IF trans. Pri.	8.5
L17 1st IF trans. Sec.	8.5
L18 2nd IF trans. Pri.	8.5
L19 2nd IF trans. Sec., total	8.5
L20 Speaker speech coil	1.7
L21 Hum neutralising coil	0.15
L22 Speaker field coil	1,200.0
T1 Speaker input trans. Pri.	350.0
T2 Mains trans. Pri., total	0.2
T2 Mains trans. Heater sec.	34.0
T2 Mains trans. Rect. heat. sec.	0.1
T2 Mains trans. HT sec., total	580.0
S1-S22 Waveband switches	—
S23, 24 Radio/gram change switches	—
S25-27 Indicator lamps switches	—
S28 Mains switch, ganged R12	—
F1 Mains circuit fuse	—

## VALVE ANALYSIS

Valve voltages and currents given in the table (col. 5) are those measured in our receiver when it was operating on mains of 230 V, using the 220-230 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.

If valve adaptors are used to connect the meter into circuit for current measurements, care should be taken to see that the valve screen is slipped over V2 and earthed while the anode and screen currents are being observed, as otherwise instability may occur.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 TH62	280	2.0	111	2.4
V2 6U7G	113	4.8	—	—
V3 6Q7G	280	8.7	111	2.7
V4 6V6G	114	0.85	—	—
V5 5Z4G	261	44.0	280	5.0
	292†	—	—	—

† Each anode. AC.

## GENERAL NOTES

**Switches.**—S1-S27 are the waveband, radio/gram and scale lamp switches, in three rotary units beneath the chassis. These are indicated in our under-chassis view, and shown in detail in the diagrams in col. 3, where they are drawn as seen looking from the underside of the chassis, in the directions of the arrows in the under-chassis view.

The table (col. 2) gives the switch positions for the four control settings, starting from fully anti-clockwise. A dash indicates open, and C closed.

**S28** is the QMB mains switch, ganged with the volume control R12.

**Coils.**—L1 and L2 are two small variable iron-cored units mounted on the rear and front members of the chassis respectively. L3, L6; L4, L7; L5, L8; L9, L12, L15; L10, L13 and L11, L14 are in six uncreened tubular units beneath the chassis.

The IF transformers L16, L17 and L18, L19 are in two screened units on the chassis deck, with their associated trimmers.

**Scale and Indicator Lamps.**—The two scale lamps are Philips MES types, with tubular frosted bulbs, and are marked 5.0-55. The three indicator lamps, switched by S25-S27, are Osram MES types, with small bulbs, and are rated at 6.5 V. 0.2 A.

**MW.**—Switch set to MW, tune to 220 m on scale, feed in a 220 m (1,362 KC/S) signal, and adjust C38, then C31, for maximum output. With sets using variable trackers, feed in a 500 m (600 KC/S) signal, tune it in, and adjust C35 for maximum output, while rocking the gang for optimum results. Return to 220 m, and re-adjust C38 and C31, if necessary.

**SW.**—Switch set to SW, tune to 16 m on scale, feed in a 16 m (18.75 MC/S) signal, and adjust C37, then C30, for maximum output. A fixed tracker is used in all sets on this band.

**261m Rejector.**—If this should need adjustment, switch set to LW, feed in a strong 261 m (1,149 KC/S) signal, and adjust core of L2 for minimum output.

# TABLE AND DIAGRAMS OF THE SWITCH UNITS

DECCA  
AW6

Switch	LW	MW	SW	Gram.
Sr	—	—	<b>c</b>	—
S2	—	<b>c</b>	—	—
S3	<b>c</b>	—	—	—
S4	<b>c</b>	<b>c</b>	—	—
S5	<b>c</b>	—	<b>c</b>	—
S6	—	<b>c</b>	<b>c</b>	—
S7	—	—	—	<b>c</b>
S8	—	—	<b>c</b>	—
S9	—	<b>c</b>	—	—
S10	<b>c</b>	—	—	—
S11	—	—	—	<b>c</b>
S12	—	—	<b>c</b>	—
S13	—	<b>c</b>	—	—
S14	<b>c</b>	—	—	—
S15	—	—	—	<b>c</b>
S16	—	—	—	<b>c</b>
S17	<b>c</b>	<b>c</b>	<b>c</b>	—
S18	<b>c</b>	—	<b>c</b>	—
S19	—	<b>c</b>	<b>c</b>	—
S20	—	—	<b>c</b>	—
S21	—	<b>c</b>	—	—
S22	<b>c</b>	—	—	—
S23	<b>c</b>	<b>c</b>	<b>c</b>	—
S24	—	—	<b>c</b>	<b>c</b>
S25	—	—	<b>c</b>	—
S26	—	<b>c</b>	—	—
S27	<b>c</b>	—	—	—

Diagrams of the switch units, as seen looking at the underside of the chassis in the directions of the arrows in the under-chassis view.

