

COMPONENTS AND VALUES

RESISTANCES	Values (ohms)
R1 Anti-modulation choke damping	10,000
R2 V1 tetrode CG decoupling	500,000
R3 V1 tetrode CG resistance	3,000,000
R4 V1 fixed GB resistance	150
R5 V1 osc. CG resistance	500,000
R6 Osc. circuit MW reaction damping	2,500
R7 V1 osc. anode HT feed resistance	25,000
R8 V1 osc. CG resistance	50,000
R9 V1, V2 SG's HT feed resistance	25,000
R10 V2 and T.L. CG's decoupling	500,000
R11 V2 fixed GB resistance	300
R12 2nd IF trans. pri. damping	600,000
R13 V3 diodes load resistance	500,000
R14 IF stopper	25,000
R15 Gramophone PU shunt	25,000
R16 Manual volume control	500,000
R17 V3 triode CG resistance	500,000
R18 V3 triode anode HT feed	50,000
R19 V3 triode anode load	250,000
R20 Variable tone control	100,000
R21 V4 CG input pot. divider	500,000
R22 V4 CG resistance	35,000
R23 V3 triode and V4 CG's decoupling	250,000
R24 V4 anode load resistance	250,000
R25 V4 CG resistance	500,000
R26 V6 CG resistance	500,000
R27 V5 anode RF stopper	100
R28 V6 anode RF stopper	100
R29 V5 V6 GB resistance	300
R30 V3 triode and V4 auto GB resistance	25
R31 T.L. anode HT feed	250,000
R32 Scale lamps shunt	90
R33 Part heater circuit shunt	277
R34 V7 heater shunt	166
R35 V7 anode current limiting resistance	100
R36 V7 anode current limiting resistance	100
R37 Heater circuit ballast	380*

* 45 Ω + 45 Ω + 290 Ω.

STATION SETTING

In the model 882 the station trimmers may be adjusted through holes in the bottom of the cabinet. In radiogram model 885 it is necessary to withdraw the chassis to re-set the trimmers.

Looking at the front of the set, the first three buttons counting from the left cover wavebands of 200-300 m, 250-350 m, and 300-400 m respectively. The seventh and eighth buttons cover 350-400 m and 400-550 m. The tenth and eleventh buttons (LW) cover 1,000-1,600 m and 1,400-2,000 m respectively.

The trimmer screws are indicated in our underchassis view. Thus **C46** and **C53** belong to the first button (200-300 m) while **C52** and **C59** belong to the eleventh button (1,400-2,000 m).

Select the button covering the wavelength of the required station, and adjust the corresponding oscillator trimmer until the station is heard. Then adjust the corresponding aerial trimmer for maximum output. Finally readjust both trimmers.

If the station to which the button is being adjusted is not very strong, it may be difficult to hear it on the oscillator trimmer while its aerial trimmer is far off tune. It may then be necessary to tune both trimmers to the nearest strong known station, and then to take the aerial trimmer up or down in small steps, searching on the oscillator trimmer for the required station at each step.

Alternatively, a signal generator may be used for rough adjustment, and then final check can be made on the station itself.

CONDENSERS

CONDENSERS	Values (μF)
C1 Aerial series condenser	0.0005
C2 Earth isolating condenser	0.1
C3 Aerial circuit MW and LW coupling potential divider	0.0001
C4 Aerial SW coupling condenser	0.00002
C5 V1 cathode by-pass	0.1
C6 HT circuit RF by-pass	0.25
C7 Osc. circuit LW fixed trimmer	0.00005
C8 V1 osc. anode coupling	0.00025
C9 V1, V2 SG's RF by-pass	0.00025
C10 V1, V2 SG's decoupling	0.1
C11 V2 CG decoupling	0.1
C12 V2 CG resistance	0.00025
C13 V2 cathode by-pass	0.1
C14 IF by-pass condensers	0.00025
C15 V3 triode and V4 CG's decoupling	0.25
C16 AF coupling condensers	0.02
C17 V3 triode	0.02
C18 V3 triode	0.02
C19 IF by-pass	0.0001
C20 V3 anode RF by-pass	0.1
C21 IF by-pass	0.00025
C22 Part of variable tone control	0.01
C23 V3 triode to V4 AF coupling	0.01
C24 V4 to V5 AF coupling	0.01
C25 V3 triode to V6 AF coupling	0.01
C26 V5, V6 cathodes by-pass	5.0
C27 HT smoothing	16.0
C28 Auto GB circuit by-pass	16.0
C29 Mains RF by-pass	25.0
C30 HT smoothing	0.01
C31 V3 triode and V4 CG's decoupling	—
C32 Aerial SW (manual) trimmer	—
C33 Aerial circuit MW (manual) trimmer	—
C34 Aerial circuit manual tuning	—
C35 Oscillator circuit manual tuning	—
C36 Osc. circuit SW trimmer	—
C37 Osc. circuit MW (manual) trimmer	—
C38 Osc. circuit LW trimmer	—
C39 Osc. circuit SW tracker	—
C40 Osc. circuit MW tracker	—
C41 1st IF trans. pri. trimmer	—
C42 1st IF trans. sec. trimmer	—
C43 2nd IF trans. pri. trimmer	—
C44 2nd IF trans. sec. trimmer	—
C45 Aerial circuit MW automatic tuning trimmers	—
C46 Aerial circuit LW automatic tuning trimmers	—
C47 Oscillator circuit MW automatic tuning trimmers	—
C48 Oscillator circuit LW automatic tuning trimmers	—

* Electrolytic. † Variable. ‡ Pre-set.

OTHER COMPONENTS

OTHER COMPONENTS	Approx. Values (ohms)
L1 Aerial anti-modulation choke	20.0
L2 Aerial circuit SW tuning coil	0.1
L3 Aerial circuit MW tuning coil	3.0
L4 Aerial circuit LW tuning coil	17.0
L5 Osc. circuit SW tuning coil	0.1
L6 Osc. circuit MW tuning coil	3.0
L7 Osc. circuit LW tuning coil	5.0
L8 Oscillator SW reaction coil	0.5
L9 Oscillator MW reaction coil	1.0
L10 1st IF trans. (Pri.)	9.0
L11 2nd IF trans. (Sec.)	11.0
L12 2nd IF trans. (Pri.)	12.0
L13 2nd IF trans. (Sec.)	9.0
L14 Speaker speech coil	2.0
L15 HT smoothing choke	230.0
L16 Speaker in (Pri., total put trans. (Sec.))	660.0
L17 SW manual button groups	—
L18 MW manual button groups	—
L19 LW manual button groups	—
L20 MW automatic button groups	—
L21 LW automatic button groups	—
L22 Gram PU switch	—
L23 Mains switch, ganged	—

Scale Lamps.—These are two National Union miniature bayonet cap types, marked N51. The rating is presumably

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating on AC mains of 228 V, using the 220-230 V tapping on the mains transformer. 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 6A8G	238	4.7	98	4.3
V2 6U7G	238	6.6	98	1.5
V3 6Q7G	98	0.3	—	—
V4 6C5G	48	0.8	—	—
V5 6V6G	228	23.0	238	1.5
V6 6V6G	228	23.0	238	1.5
V7 25Z6G†	238	0.8	—	—
T.L. 6G5	238	0.4	—	—

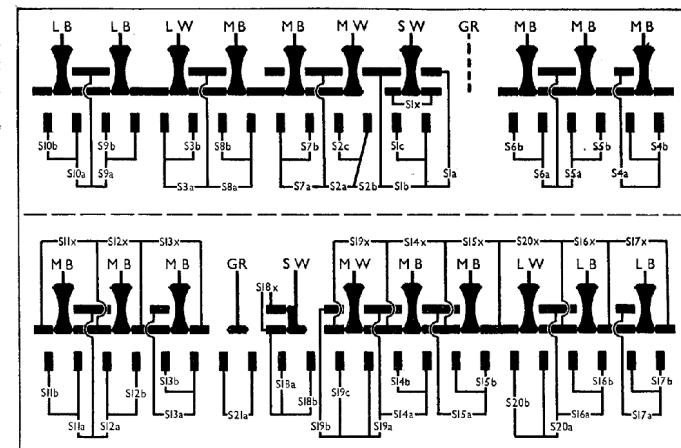
† Cathode to chassis, 258 V DC.

GENERAL NOTES

Switches.—All the switches, with the exception of **S22**, the mains switch, are of the press-button type, and are contained in a single double-sided unit mounted inside the front of the chassis. The switches controlled by each press-button are assigned a number, followed by a suffix letter **a**, **b**, **c** or **x**. The **a**, **b** and **c** switches *close* when their button is pressed while the **x** switches *open* when their button is pressed.

The action of the switches is explained in detail under "Circuit Description."

The switch unit is indicated in our under-chassis view, but for identification of the individual switches the diagrams in cols. 5 and 6 must be consulted. These diagrams are of the two sides of the switch unit. The lower one shows the switches seen when looking at the underside of the chassis, while the upper one shows the switches on the unit which are normally hidden from view by the chassis deck.



Diagrams of both sides of the press-button switch unit. The lower view is that as seen when looking at the underside of the chassis. The upper view is that seen if the switch unit is removed from the chassis and turned over.

CIRCUIT ALIGNMENT

IF Stages.—Remove the side (top cap) connection of **V1** and connect a 250 μF electrolytic capacitor between the cap and a 250 μF electrolytic capacitor and earth. Switch set to MW, and turn gain and volume control to maximum.

RF and Oscillator Stages.—With the gain at maximum, pointer should be at the right-hand limit of the horizontal scale. Connect signal generator to **A** and **B** leads, via a suitable dummy aerial. Turn volume control to maximum.

SW.—Set the SW tracker in series with the MW and LW trackers. It is essential to align the SW band first.

Switch set to SW, tune to 25 MC/S on scale, and feed in a 25 MC/S (25 m) signal. Adjust **C26** for maximum output, using the peak involving the least volume.

Return to 250 m and re-check **C27** and **C28** for maximum output, while rocking the gain for optimum results. Return to 250 m and re-check **C27** and **C28**. Repeat until no further improvement results.

LW.—Switch set to LW, tune to 1.5 MC/S on scale. Feed in a 1.5 MC/S (1.5 m) signal, and adjust **C38**, then **C39**, for maximum output. Feed in a 2.0 MC/S (2.0 m) signal, tune it in, and adjust **C41** for maximum output, while rocking the gain for optimum results. Return to 2.0 m and re-check **C38** and **C39**. Repeat until no further improvement results.

MW.—Switch set to MW and tune to 250 m on scale. Feed in a 250 m (1.2 MC/S) signal, and adjust **C37**, then **C38** for maximum output. Feed in a 250 m (1.2 MC/S) signal, tune it in, and adjust **C40** for maximum output, while rocking the gain for optimum results. Return to 250 m and re-check **C37** and **C38**. Repeat until no further improvement results.

Coils.—**L1** is beneath the chassis, close to the aerial lead entry point. **L2-L4**; **L5-L9** and the IF transformers **L10**, **L11** and **L12**, **L13**, are in four screened units on the chassis deck. The second unit also contains **R6**, **C9**, while the IF units contain their associated trimmers. **L15**, the smoothing choke, is mounted beneath the speaker, and is therefore not shown in the chassis illustrations.