



Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 MS4B	230	3.5	62	0.6
V2 MH4	40	1.8	—	—
V3 MPT4	250	36.0	210	6.5
V4 U12	—	25.0†	—	—

† Note: DC current, each anode.

COMPONENTS AND VALUES

RESISTANCES		Values (ohms)
R1	V1 CG resistance ...	2,000
R2	V1 SG HT potential divider ...	50,000
R3	V1 gain control* ...	75,000
R4	V1 anode HT feed ...	10,000
R5	V1 fixed GB ...	10,000
R6	V1 fixed GB ...	320
R7	RF coupling LW damping ...	2,000
R8	V2 grid leak ...	500,000
R9	PU limiting resistance ...	50,000
R10	PU input gain control* ...	6,000
R11	V2 (gram) GB resistance ...	1,000
R12	V2 heater circuit pot. ...	20
R13	V2 anode load ...	55,000
R14	V2 anode decoupling resistances ...	35,000
R15	V3 SG HT feed ...	35,000
R16	V3 SG HT feed ...	10,000
R17	V3 CG decoupling ...	200,000

* Ganged C26.

Switch Table

Switch	MW	LW	Gram
S4	o	o	o
S5	o	o	o
S6	o	o	o
S7	o	o	o
S8	o	o	o
S9	o	o	o
S10	o	o	o
S11	o	o	o
S12	o	o	o
S13	o	o	o
S14	o	o	o

CONDENSERS		Values (μF)
C1	Aerial series condensers ...	0.00015
C2	Band-pass coupling ...	0.000025
C3	V1 SG decoupling ...	0.02
C4	V1 anode decoupling ...	0.1
C5	V1 to V2 RF coupling ...	1.0
C6	V1 cathode by-pass ...	0.0001
C7	V2 CG condenser ...	0.1
C8	V2 anode decoupling condensers ...	0.0001
C9	V2 anode decoupling condensers ...	1.0
C10	V2 anode decoupling condensers ...	1.0
C11	RF by-pass condensers ...	0.0005
C12	AF coupling to T1 ...	0.0005
C13	V2 cathode by-pass ...	0.1
C14	Fixed tone corrector ...	2.0
C15	V3 SG decoupling ...	0.0001
C16	Fixed tone corrector ...	2.0
C17	V3 CG decoupling ...	0.002
C18	HT smoothing condensers ...	2.0
C19	HT smoothing condensers ...	2.0
C20	Mains aerial coupling ...	3.0
C21	Band-pass pri. tuning ...	0.001
C22†	B-P pri. MW trimmer ...	—
C23†	Band-pass sec. tuning ...	—
C24†	B-P sec. MW trimmer ...	—
C25†	Reaction control* ...	—
C26†	RF circuit tuning ...	—
C27†	—	—

† Variable. ‡ Pre-set. * Ganged R4, R10.

OTHER COMPONENTS		Approx. Values (ohms)
L1	Band-pass primary coils ...	1.6
L2	Band-pass secondary coils ...	16.0
L3	Band-pass secondary coils ...	1.6
L4	Reaction coils, total ...	16.5
L5	Reaction coils, total ...	4.0
L6	RF circuit tuning coils ...	1.6
L7	RF anode RF choke ...	17.5
L8	RF filter choke ...	90.0
L9	Speaker speech coil ...	90.0
L10	Hum neutralising coil ...	8.0
L11	Speaker field coil, total* ...	0.5
L12	Intervalve { Pri. ...	2,250.0
L13	trans. { Sec. ...	675.0
T1	Speaker input { Pri. ...	5,000.0
T2	trans. { Sec. ...	775.0
T3	trans. { Pri., total ...	2.0
	Mains { Heater sec. ...	44.0
	trans. { Rect. heat sec. ...	0.1
	trans. { HT sec., total ...	0.1
S1-S3	Aerial selector switches ...	1,275.0
S4-S10	Waveband switches ...	—
S11-S14	Radio/gram switches ...	—
S15	Mains switch ...	—

* Tapped at 250 Ω from F+ (chassis) end.

CIRCUIT ALIGNMENT

Alignment adjustments must be made on the MW band only, with the aerial selector switch S1-S3 in the A1 (central) position. Connect signal generator leads via a suitable dummy aerial to A and E sockets.

Switch set to MW, feed in a 300 m (1,000 KC/S) signal, tune it in, and adjust C23, then C25, for maximum output. Repeat these adjustments.

Now adjust the pointer by the screw on the front of the cabinet, and check the calibration at several points on the MW and LW scales, finally setting the pointer for the best compromise, and re-wax the heads of the trimmers.

Where possible, it is advisable to give a final check on C23 with the set operating on a broadcast signal, with the aerial with which it will normally operate.

Condenser Block.—Condensers C4, C5, C9, C10, C14, C16, C18, C19 and C20 are contained in a multiple block mounted on the chassis deck. The connecting tags are underneath the block, and they project into the under-chassis compartment through an aperture in the chassis pressing. A diagram of the tag positions, inset beneath the circuit diagram overleaf, shows the internal connections of the block. It is drawn as seen when viewed from the rear of the underside of the chassis as seen in our under-chassis view, where the position of the connecting panel is indicated.

Condenser C3.—This has a capacity of 0.02 μF, comprising two 0.01 μF mica condensers connected in parallel. It is important that replacements should be non-inductive.

Condenser C13.—In our chassis, this was contained in the metal casing of T1, with C15, but in some chassis it may be a separate unit, when it will be found mounted beneath the chassis near C7.

MARCONI - 253AC, 254AC, 271RG