



## COMPONENTS AND VALUES

Condensers	Values (μF)
C1	External aerial coupling .. 0.00005
C2	V1 cont. grid decoupling .. 0.1
C3	V1 and V3 S.G.'s by-pass .. 0.2
C4	V1 and V2 anodes decoupling .. 0.4
C5	V2 cont. grid condenser .. 0.0001
C6	V2 S.G. by-pass .. 0.2
C7	1st I.F. trans. pri. tuning (part) .. 0.0001
C8	Osc. L.W. trimmer .. 0.00015
C9	Osc. tracker .. 0.0017
C10	V3 anode decoupling .. 0.1
C11*	V3 anode decoupling .. 10.0
C12	I.F. by-passes .. 0.0002
C13	I.F. by-passes .. 0.0002
C14	A.V.C. line decoupling .. 0.1
C15	L.F. coupling to V4 triode .. 0.1
C16*	V4 cathode by-pass .. 25.0
C17	V1, V2, V3 and V4 H.T. smoothing .. 2.0
C18	Coupling to V4 A.V.C. diode .. 0.0002
C19	L.F. coupling to V5 .. 0.1
C20	V4 anode I.F. by-pass .. 0.001
C21*	A.V.C. delay pot. div. by-pass .. 25.0
C22	V5 cont. grid decoupling .. 0.25
C23*	V5 aux. grid by-pass .. 4.0
C24	Tone corrector .. 0.003
C25*	H.T. smoothing .. 4.0
C26*	H.T. smoothing .. 8.0
C27	Mains H.F. by-passes .. 0.002
C28	Mains H.F. by-passes .. 0.002
C29†	Frame aerial tuning .. —
C30†	Frame aerial trimmer .. 0.0003
C31†	H.F. trans. L.W. trimmer .. 0.00007
C32†	H.F. trans. tuning .. —
C33†	H.F. trans. main trimmer .. —
C34†	Oscillator tuning .. —
C35†	Oscillator main trimmer .. —
C36†	1st I.F. trans. pri. tuning (part) .. —
C37†	1st I.F. trans. sec. tuning .. —
C38†	2nd I.F. trans. pri. tuning .. —
C39†	2nd I.F. trans. sec. tuning .. —

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

**Coils.**—L1 and L2 form the frame aerial, terminals being provided on the chassis for their connection. The remaining coils are in four screened units beneath the chassis. The screens are easily removable by undoing one nut on each. The approximate positions of the various coils are shown by dotted lines in our under-chassis view. Note that the first I.F. transformer, L10, L11, also contains C7, while the second contains C18. The I.F. trimmers are at the base of their respective transformer units, and are adjustable through holes in the vertical partition carrying the coils.

Circuit diagram of the Marconiphone 279 transportable. Note that a tetrode frequency changer is employed. The colour coding for the connections between chassis, speaker and power pack is shown.

Resistances	Values (ohms)
R1	L.W. frame damping .. 35,000
R2	V1 cont. grid decoupling .. 1,000,000
R3	V1 cont. grid stabiliser .. 1,000
R4	V1, V2 and V3 S.G.'s H.T. potential divider .. 23,000
R5	V1 and V2 anodes decoupling .. 23,000
R6	V2 S.G. H.T. feed .. 1,000
R7	V2 grid resistance .. 100,000
R8	V2 grid resistance .. 500,000
R9	V4 signal diode load .. 500,000
R10	I.F. stopper .. 50,000
R11	A.V.C. line decoupling .. 500,000
R12	Manual volume control .. 250,000
R13	V4 G.B. resistance .. 1,000
R14	V4 triode anode load .. 50,000
R15	V4 A.V.C. diode load .. 500,000
R16	A.V.C. delay potential divider .. 10,000
R17	V1, V2, V3 and V4 H.T. smoothing .. 100,000
R18	V5 aux. grid H.T. feed .. 10,000
R19	V5 grid I.F. stopper .. 5,000
R20	V5 grid I.F. stopper .. 230,000
R21	V5 grid resistance .. 500,000
R22	V5 cont. grid decoupling .. 230,000
R23	Hum control .. 48

Other Components	Values (ohms)
L1	Frame aerial windings .. 2.0
L2	Frame aerial windings .. 20.0
L3	H.F. transformer primary coil .. 20.0
L4	H.F. trans. secondary coils .. 5.0
L5	H.F. trans. secondary coils .. 15.0
L6	Oscillator reaction coils total .. 1.0
L7	Oscillator tuning coils .. 3.5
L8	Oscillator tuning coils .. 7.0
L9	1st I.F. trans. Pri. .. 65.0
L10	1st I.F. trans. Sec. .. 95.0
L11	2nd I.F. trans. Pri. .. 75.0
L12	2nd I.F. trans. Sec. .. 95.0
L13	Speaker speech coil .. 8.0
L14	Hum neutralising coil .. 2.5
L15	Speaker field winding, total .. 2,250.0
L16	Tuning indicator meter .. 3,500.0
T1	Speaker input trans. Pri. .. 750.0
T2	Speaker input trans. Sec. .. 2.0
T3	Mains trans. Pri. total .. 28.0
T4	Mains trans. Heater sec. .. 0.1
T5	Mains trans. Rect. heat. sec. .. 0.1
T6	Mains trans. H.T. sec. .. 540.0
S1	Wave-band switches .. —
S2	Radio muting switch (gram.) .. —
S3	Gram. pick-up switch .. —
S4	Speaker muting switch .. —
S5	Mains switches .. —
S6	Mains switches .. —
S7	Mains switches .. —
S8	Mains switches .. —
S9	Mains switches .. —

## VALVE ANALYSIS

Valve voltages and currents given in the table below were measured with the receiver operating on A.C. mains of 230 V, using the 211-230 V tap. There was no signal input as the frame aerials were disconnected and the three terminals on the chassis strip were shorted together. The volume control was at maximum and the receiver was tuned to the highest wavelength on the M.W. band.

Voltages were measured on the 1,200 V scale of an Avometer, with chassis as negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 VMS4B	160	3.0	70	0.9
V2 MS4B	160	0.6	30	0.3
V3 VMS4B	150	3.2	70	0.7
V4 MHD4	90	1.5	—	—
V5 MPT4	260	37.0	250	7.1
V6 MU12	350*	—	—	—

\* Each anode, A.C.

## GENERAL NOTES

**Switches.**—S1-S6 are the waveband and pick-up switches, in a single unit. Its position is indicated by dotted lines in the plan chassis view, while in the under-chassis view the individual switch tags are shown. Note that the bottom left and top right tags are blank, while certain of the switches have one tag in common. The switch positions for the various settings are given in the table below, O indicating open, and C, closed.

Switch	M.W.	L.W.	Gram.
S1	C	O	O
S2	C	C	O
S3	C	O	C
S4	C	O	C
S5	O	C	C
S6	O	O	C

S8 and S9 are the Q.M.B. mains switches, ganged in a single unit, indicated in the illustration of the power pack.

S7 is the muting switch, which closes momentarily between each position of the main switch unit, but is open in each of these positions.