MARCONIPHONE

MODEL 235

3-VALVE (PLUS RECTIFIER) A.C. RECEIVER

COMPONENTS AND VALUES

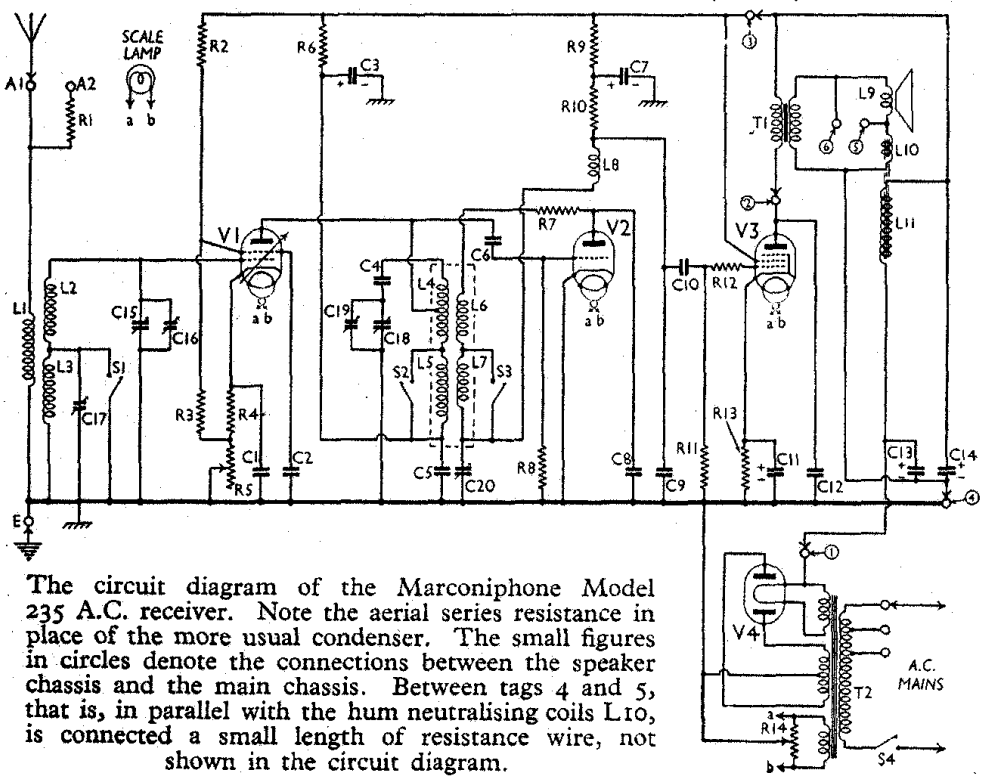
	Resistances	Values (ohms)
R1	Aerial series resistance	23,000
R2	V1 S.G. pot. divider	35,000
R3	V1 S.G. pot. divider	23,000
R4	V1 fixed G.B. resistance	230
R5	V1 gain control	14,000
R6	V1 anode decoupling	5,000
R7	Reaction series resistance	100
R8	V2 grid leak	2,300,000
R9	V2 anode decoupling	100,000
R10	V2 anode resistance	50,000
R11	V3 grid resistance	230,000
R12	V3 grid H.F. stopper	100,000
R13	V3 G.B. resistance	50
R14	Hum control	48·5

	Condensers	Values (μF)
C1	V1 cathode by-pass	0·1
C2	V1 S.G. by-pass	0·5
C3*	V1 anode decoupling	2·0
C4	T.A. circuit D.C. blocking	0·05
C5	V1 anode decoupling	0·1
C6	V2 grid condenser	0·000075
C7*	V2 anode decoupling	1·0
C8	V2 anode H.F. by-passes	0·00075
C9	V2 anode H.F. by-passes	0·00075
C10	L.F. coupling to V3	0·1
C11*	V3 cathode by-pass	25·0
C12	V3 anode tone compensator	0·002
C13*	H.T. smoothing	8·0
C14*	H.T. smoothing	8·0
C15	Aerial circuit tuning	—
C16	Aerial circuit main trimmer	—
C17	Aerial circuit L.W. trimmer	—
C18	H.F. anode circuit tuning	—
C19	H.F. anode circuit trimmer	—
C20	Reaction condenser	0·0008

* Dry electrolytics.

	Other Components	Values (ohms)
L1	Aerial coupling coil	12·0
L2	Aerial tuning coils	3·0
L3	Aerial tuning coils	24·0
L4	H.F. anode tuning coils	3·0
L5	H.F. anode tuning coils	24·0
L6	Reaction Coils	0·75
L7	Reaction Coils	2·0
L8	V2 anode H.F. choke	90·0
L9	Speaker speech coil	1·75
L10*	Hum neutralising coils	0·5
L11	Speaker field winding	2,000
T1	Speaker input trans. Pri.	750·0
T1	Speaker input trans. Sec.	0·2
T2	Mains trans. Pri. total	29·0
T2	Mains trans. Heater sec.	0·1
T2	Mains trans. Rect. fil. sec.	0·1
T2	Mains trans. H.T. sec.	680·0
S1-S3	Waveband switches, ganged	—
S4	Mains switch	—

* Two in series.



The circuit diagram of the Marconiphone Model 235 A.C. receiver. Note the aerial series resistance in place of the more usual condenser. The small figures in circles denote the connections between the speaker chassis and the main chassis. Between tags 4 and 5, that is, in parallel with the hum neutralising coils L10, is connected a small length of resistance wire, not shown in the circuit diagram.

VALVE ANALYSIS

The voltage and current readings listed in the table are those given by Marconiphone for an average chassis working with no aerial or earth connections. The volume control was set at maximum and reaction was at minimum. All voltages were measured with a low consumption meter, chassis being negative.

Valve	Anode Volts	Anode Current (mA)	Screen Volts	Screen Current (mA)
V1 VMS4B	170	4·0	70	0·6
V2 MH41	65	1·0	—	—
V3 N41	170	42·0	200	10·0
V4 U12	330*	—	—	—

* Each anode, A.C.