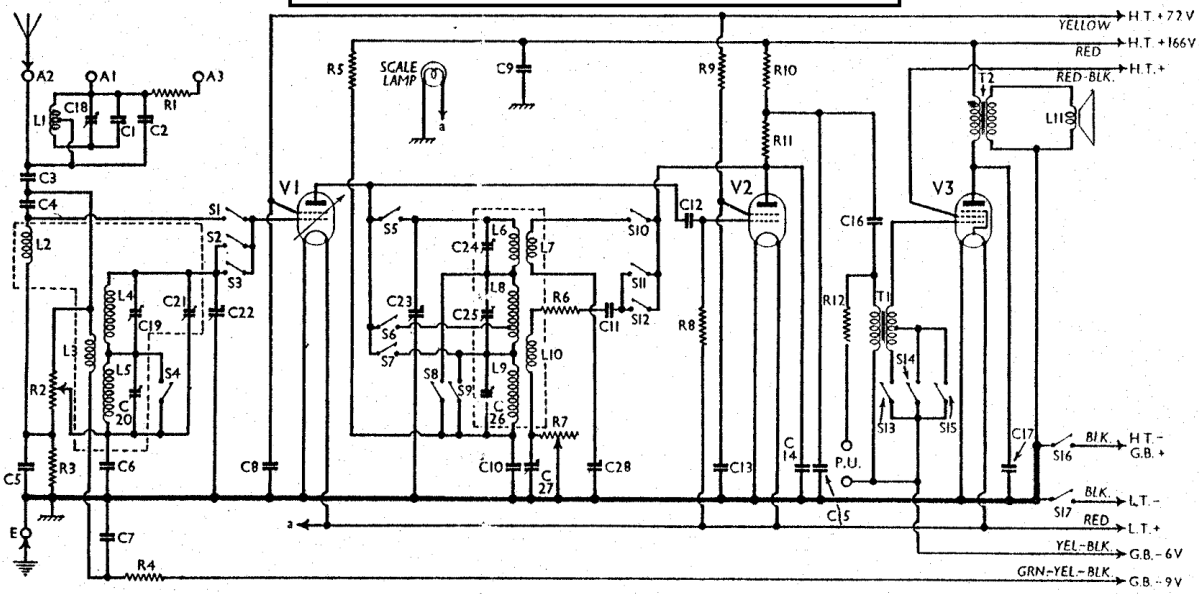
MARCONIPHONE - 375



Circuit diagram of the Marconiphone 375 3-band battery receiver.

COMPONENTS AND VALUES

	RESISTANCES	Values (ohms)
R1	Aerial series resistance	10,000
R2	V1 gain control	100,000
R3	Gain control fixed min.	23,000
R4	V1 G.B. circuit decoupling	1,000
R5	V1 anode decoupling	10,000
R6	M.W., L.W., reaction stabiliser	500
R7	M.W., L.W. pre-set reaction control	3,000
R8	V2 grid leak	2,300,000
R9	V2 S.G. H.T. feed	50,000
R10	V2 anode load	50.000
R11	V2 anode H.F. stopper	10,000
R12	Gram. P.U. series resistance	1,000

	CONDENSERS	Values (μF)
C1	Droitwich rejector tuning, fixed	0·00035
C2	Aerial series condensers	0·00023
C3	Aerial series condensers	0·0005
C4	Aerial series condensers	0·000075
C5	V1 C.G. decoupling (S.W.)	0·0005
C6	V1 C.G. decoupling (M.W., L.W.)	0·1
C7	V1 G.B. circuit decoupling	0·1
C8	V1 S.G. by-pass	0·1
C9	H.T. supply by-pass	0·1
C10	V1 anode decoupling	0·1
C11	M.W., L.W. series reaction cond.	0·0005
C12	V2 C.G. condenser	0·000075
C13	V2 S.G. by-pass	0·1
C14	V2 anode H.F. by-passes	0·000035
C15	V2 anode H.F. by-passes	0·0001
C16	L.F. coupling to T1	0·1
C17	Tone corrector	0·001
C18‡	Droitwich rejector tuning	—
C19‡	Aerial M.W. trimmer	—
C20‡	Aerial L.W. trimmer	—
C21‡	Aerial main trimmer	—
C22†	Aerial circuit tuning	—
C23†	V1 anode circuit tuning	—
C24‡	V1 anode S.W. trimmer	—
C25‡	V1 anode M.W. trimmer	—
C26‡	V1 anode L.W. trimmer	—
C27‡	Pre-set reaction control, M.W., L.W.	—
C28†	Reaction control, S.W.	0·0003

† Variable. ‡ Pre-set.

	OTHER COMPONENTS	Approx. Values (ohms)
L1	Droitwich rejector coil, total	6·0
L2	Aerial choke coil, S.W.	4·0
L3	Aerial M.W., L.W. coupling coil	7·0
L4	Aerial M.W., L.W. tuning coils	2·0
L5	Aerial M.W., L.W. tuning coils	16·0
L6	V1 anode tuning coil, S.W.	0·1
L7	S.W. reaction coil	0·5
L8	V1 anode tuning coils, M.W. and L.W.	2·0
L9	V1 anode tuning coils, M.W. and L.W.	16·5
L10	M.W., L.W. reaction coil	1·5
L11	Speaker speech coil	4·0
T1	Intervalve trans. Pri.	200·0
T1	Intervalve trans. Sec. total	5,500·0
T2	Output trans. Pri.	1,000·0
T2	Output trans. Sec.	0·6
S1-12	Waveband switches	—
S13-15	T1 ratio change switches	—
S16	H.T. and G.B. circuit switch	—
S17	L.T. circuit switch	—

VALVE ANALYSIS

Valve voltages and currents given in the table below are those measured in our receiver when it was operating with an H.T. battery reading 175 V overall. The receiver was tuned to the lowest wavelength on the medium band and the volume control was at maximum. There was no signal input.

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

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 VS24	140	1·6	70	0·5
V2 VS24	70	1·3	40	0·5
V3 PT2	155	2·9	132*	0·5

* This figure will vary according to the grading of the valve. That in our receiver was an "X" type.

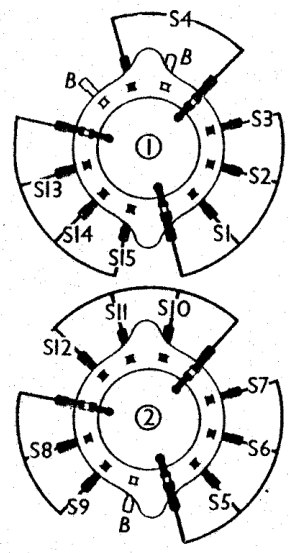
GENERAL NOTES

Switches.—**S1-S15** are the wavechange, reaction circuit and L.F. transformer switches, in two rotary units ganged together beneath the chassis. These are indicated in our under-chassis view by numbers in circles, and the arrows show the directions in which they are viewed in the diagrams on this page.

The table below gives the switch positions for the various control settings, O indicating open, and C closed.

Switch	S.W.	M.W.	L.W.
S1	C	O	O
S2	O	C	O
S3	O	O	C
S4	O	C	O
S5	C	O	O
S6	O	C	O
S7	O	O	C
S8	C	O	O
S9	O	C	O
S10	C	O	O
S11	O	C	O
S12	O	O	C
S13	C	O	O
S14	O	C	O
S15	O	O	C

S16 and **S17** are two Q.M.B. battery switches, ganged with gain control **R2.**



Switch diagrams, looking from the rear of the underside of the chassis.

The two upper tags are joined together and to chassis. The right-hand bottom tag is the other connection of **S16**, and the left-hand bottom tag that of **S17.**

Coils.—**L1,** the Droitwich rejector coil is beneath the chassis in a special bakelite moulding. **L2-L5** and **L6-L10** are in two screened units on the chassis deck. Note that the first of these also contains the fixed condensers **C3, C4.** The various trimmers are in the bases of the coils, and are adjustable by screws beneath the chassis.

Scale Lamp.—This is an Osram M.E.S. type with a tubular bulb. It is rated at 2·0 V, 0·1 A.