

# MARCONIPHONE - T24DAB

Valve	Anode		Screen	
	V	mA	V	mA
V1 X17 ...	85	0.9	46	2.2
V2 W17 ...	85	1.7	72	0.7
V3 ZD17 ...	25	0.15	25	0.04
V4 N18 ...	80	7.0	85	1.5

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerial coils	1.0	—
L2	Oscillator tuning coils	12.0	D2
L3	Osc. reaction coil	2.5	D2
L4	1st I.F. trans. Pri.	6.5	D2
L5	1st I.F. trans. Sec.	1.5	D2
L6	2nd I.F. trans. Pri.	11.0	C1
L7	2nd I.F. trans. Sec.	11.0	C1
L8	Speech coil	11.0	B1
L9	O.P. trans. Pri.	2.5	—
L10	O.P. trans. Sec.	650.0	—
T1	H.T. metal rect.	0.5	—
MR1	Waveband switches	—	G2
S1, S2	Power switches	—	B1
S3-S8	Power switches	—	B1

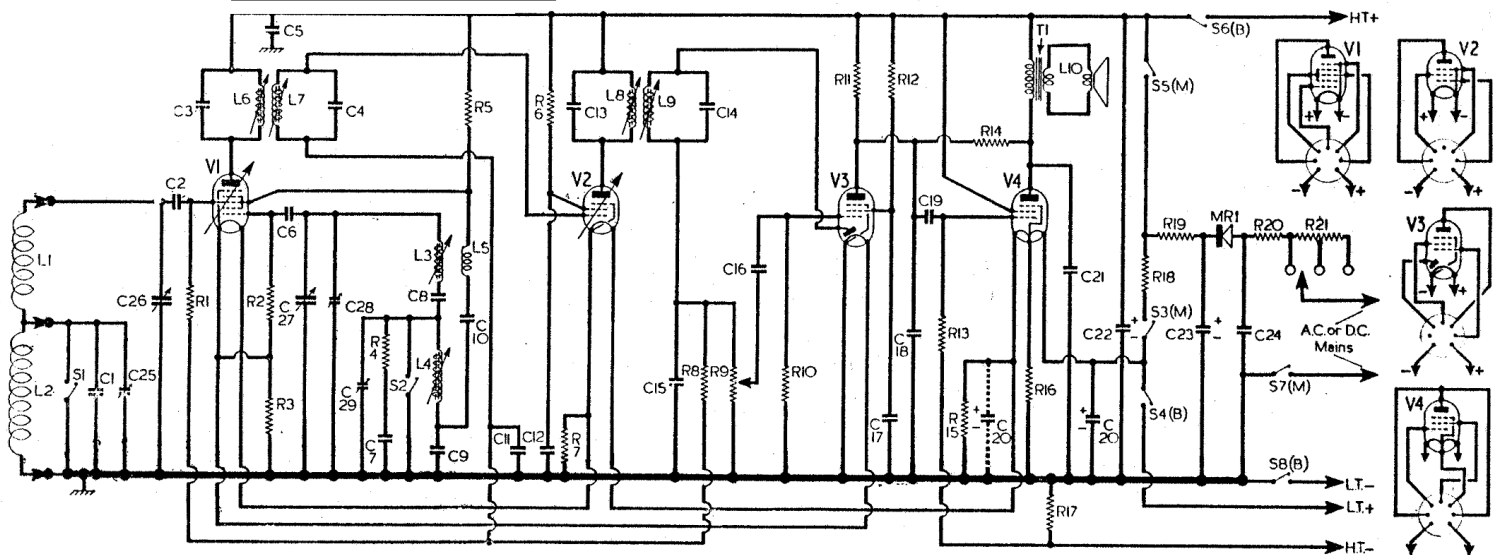
RESISTORS		Values	Locations
R1	V1 C.G.	1MΩ	F2
R2	V1 osc. C.G.	100kΩ	F2
R3	Filament shunt	470Ω	G2
R4	Osc. stabilizer	470Ω	D2
R5	Osc. H.T. feed	15kΩ	F2
R6	V2 S.G. feed	22kΩ	F2
R7	Filament shunt	1kΩ	F2
R8	A.G.C. decoupling	2.2MΩ	F2
R9	Volume control	1MΩ	A1
R10	V3 C.G.	0.8MΩ	G2
R11	V3 anode load	470kΩ	G2
R12	V3 S.G. feed	2.2MΩ	F2
R13	V4 C.G.	1MΩ	G2
R14	Neg. feed-back	4.7MΩ	G2
R15	Filament shunts	1kΩ	F2
R16	Filament shunts	1.5kΩ	G2
R17	V4 G.B.	120Ω	F2
R18	Filament ballast	1.78kΩ	G2
R19	H.T. smoothing	1.735kΩ	G2
R20	Surge limiter	150Ω	G2
R21	Voltage adj.	220Ω†	G2

CAPACITORS		Values	Locations
C1	L.W. aerial trim.	250pF	D2
C2	V1 C.G.	100pF	F2
C3	1st I.F. trans. tuning	—	C1
C4	H.T. R.F. by-pass	0.1μF	G2
C5	V1 osc. C.G.	100pF	F2
C6	L.W. osc. trim.	100pF	D2
C7	M.W. tracker	630pF	F2
C8	L.W. tracker	375pF	F2
C9	Osc. coupling	100pF	D2
C10	A.G.C. decoupling	0.1μF	F2
C11	V2 S.G. decoupling	0.1μF	F2
C12	2nd I.F. trans. tuning	—	B1
C13	I.F. by-pass	100pF	A1
C14	A.F. coupling	0.005μF	G2
C15	V3 S.G. decoupling	0.1μF	G2
C16	I.F. by-pass	100pF	G2
C17	A.F. coupling	0.01μF	G2
C18	Filament by-pass	100μF	A1
C19	Tone corrector	0.005μF	H2
C20*	H.T. smoothing	32μF	A1
C21*	H.T. smoothing	32μF	H2
C22*	H.T. smoothing	0.01μF	H2
C23*	Mains R.F. filter	—	D2
C24	L.W. aerial trim.	—	C1
C25†	Aerial tuning	—	C1
C26†	Osc. tuning	—	D1
C27†	M.W. osc. trim.	—	D2
C28†	L.W. osc. trim.	—	D2
C29†	L.W. osc. trim.	—	D2

Intermediate frequency 360 kc/s.

† Tapped at 110Ω + 110Ω.

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



## CIRCUIT ALIGNMENT

In order to make the R.F. and I.F. adjustments easily accessible, the chassis and escutcheon should be removed from the carrying case, and, with the frame aerial leads still connected, placed face downwards on the bench beside the case.

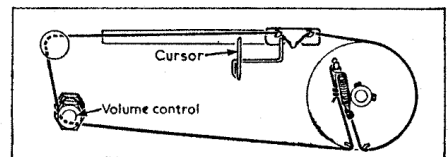
Whenever a mains supply is available it will be found more convenient to make the alignment adjustments with the receiver operating from mains, as the L.T. leads have to be extended when the batteries are used in this position.

**I.F. Stages.**—Connect output of signal generator, via an 0.1μF capacitor in each lead, to control grid (pin 6) of V2 and chassis. Switch receiver to M.W. and turn gang to maximum capacitance. Feed in a 360 kc/s (833.2 m) signal and adjust the core of L8 (location reference B1) for maximum output. Feed in a 362 kc/s (828.7 m) signal and adjust the core of L9 (F2) for maximum output. Transfer "live" signal generator lead, with isolating capacitor, to white lead on frame aerial tag panel. Feed in a 360 kc/s signal and adjust the core of L7 (E2) for maximum output. Feed in a 362 kc/s signal and adjust the core of L6 (C1) for maximum output.

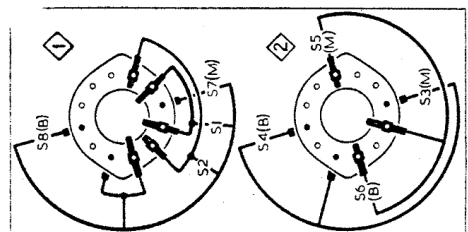
**R.F. and Oscillator Stages.**—Check that with the gang at maximum capacitance, the cursor coincides with the 2,000 m mark on the L.W. scale. It can be adjusted, if necessary, by loosening the grub screws securing the drive drum to the gang spindle and rotating the drum independently of the gang. Connect the output leads of the signal generator to a small loop aerial placed about two feet from the frame aerial in the carrying case.

**M.W.**—Switch receiver to M.W., tune to 500 m, feed in a 500 m (600 kc/s) signal and adjust the core of L3 (D2) for maximum output. Tune receiver to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust C28 (D2) for maximum output. Repeat these adjustments.

**L.W.**—Switch receiver to L.W., tune to 1,000 m, feed in a 1,000 m (300 kc/s) signal and adjust C29 (D2) for maximum output. Tune receiver to 1,875 m calibration line (between 1,750 m and 2,000 m marks), feed in a 1,875 m (160 kc/s) signal and adjust the core of L4 (D2) for maximum output. Readjust C29 at 1,000 m. Tune receiver to 1,429 m calibration line (between 1,000 m and 1,250 m marks), feed in a 1,429 m (210 kc/s) signal and adjust C25 (D2) for maximum output.



Sketch of the tuning drive system, as seen from the upper side of the chassis.



Diagrams of the waveband and mains/battery change-over units