

COSSOR - 500,501

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerial	1.0	A1
L2	S.W. aerial coup.	—	A1
L3	Aerial tuning coils	—	A1
L4		3.5	A1
L5		13.5	A1
L6	Oscillator tuning coils	—	G3
L7		2.8	F3
L8	Oscillator reaction coils	7.5	F3
L9		2.6	G3
L10	1st I.F. trans.	5.5	F3
L11		9.0	A2
L12	2nd I.F. trans.	9.0	A2
L13		9.0	B2
L14	Speech coil	9.0	B2
L15		2.5	—
T1	O.P. trans.	13.0	B1
		280.0	—
		—	—
T2	Mains trans.	265.0	C2
		265.0	—
		47.0	—
S1-S9	Waveband switches	—	F3
S10	Mains sw., g'd R9...	—	D3

Valve	Anode		Screen		Cath.
	V	mA	V	mA	
V1 62TH	208	3.0	80	3.4	9.0
	96	3.2	—	—	—
V2 62VP	204	10.0	80	2.3	12.3
V3 62DDT	46	2.0	—	—	2.0
V4 67PT	268	32.0	202	2.5	34.5†
V5 66KU	250*	—	—	—	58.0†

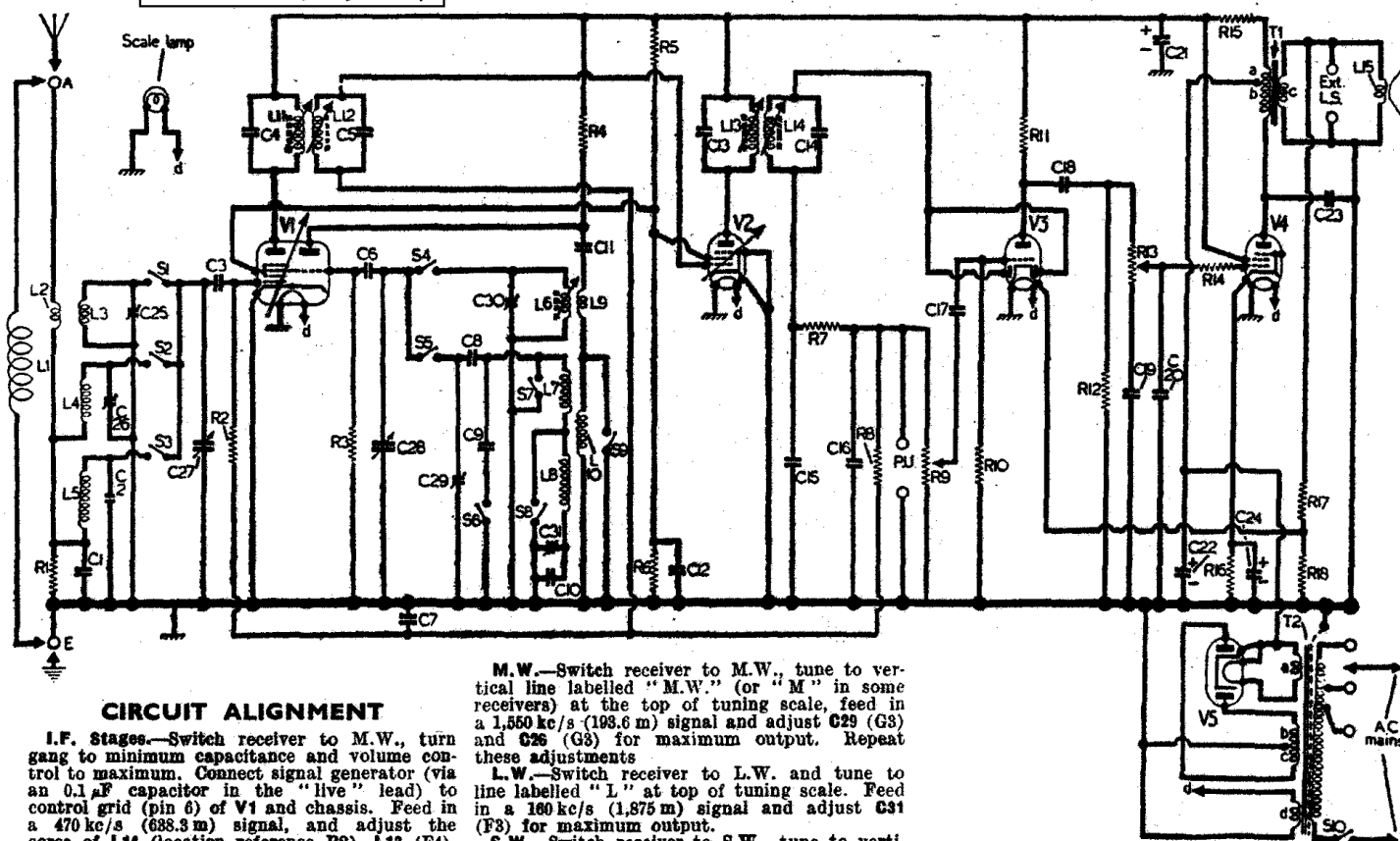
*A.C., each anode. †Cathode voltage, 9V.
‡Cathode voltage, 280V.

RESISTORS		Values	Locations
R1	Aerial shunt	1kΩ	A2
R2	V1 C.G.	330kΩ	G3
R3	V1 osc. C.G.	18kΩ	G3
R4	Osc. anode feed	33kΩ	G4
R5	S.G. pot. divider	12kΩ	F4
R6		33kΩ	G3
R7	L.F. stopper	47kΩ	F4
R8	A.G.C. decoup.	2.2MΩ	D3
R9	Volume control	500kΩ	D3
R10	V3 C.G.	4.7MΩ	E3
R11	V3 anode load	680kΩ	F3
R12	V4 C.G.	470kΩ	E3
R13	Tone control	500kΩ	E3
R14	V4 C.G. stopper	47kΩ	E4
R15	H.T. smoothing	2.7kΩ	E3
R16	V4 G.B.	180Ω	E4
R17	Neg. feed-back pot.	470Ω	F4
R18	divider	100Ω	F4

CAPACITORS		Values	Locations
C1	Aerial coup.	0.005μF	A2
C2	L.W. aerial trim.	75pF	F3
C3	V1 C.G.	500pF	G3
C4	1st I.F. trans. tuning	100pF	A2
C5		100pF	A2
C6	V1 osc. C.G.	100pF	F3
C7	A.G.C. decoupling	0.1μF	E3
C8	M.W. osc. tracker	440pF	F3
C9	L.W. osc. trim.	133pF	F3
C10	L.W. tracker	470pF	F3
C11	Osc. anode coup.	100pF	G4
C12	S.G. decoupling	0.1μF	F4
C13	2nd I.F. trans. tuning	100pF	B2
C14		100pF	B2
C15	L.F. by-passes	100pF	F4
C16		100pF	E3
C17	A.F. coupling	0.005μF	E3
C18		0.1μF	E3
C19	Parts tone control	0.002μF	E3
C20		100pF	E4
C21*	H.T. smoothing	32μF	A2
C22*		16μF	A2
C23	Tone corrector	0.005μF	E4
C24*		25μF	E4
C25†	V4 cath. by-pass	—	G3
C26†	S.W. aerial trim.	—	G3
C27†	M.W. aerial trim.	—	G3
C28†	Aerial tuning	—	A1
C29†	Oscillator tuning	—	A1
C30†	M.W. osc. trim.	—	G3
C31†	S.W. osc. trim.	—	G3
C32†	L.W. osc. tracker	—	F3

* Electrolytic. † Variable. ‡ Pre-set.

Intermediate frequency 470 kc/s.



CIRCUIT ALIGNMENT

I.F. Stages.—Switch receiver to M.W., turn gang to minimum capacitance and volume control to maximum. Connect signal generator (via an 0.1μF capacitor in the "live" lead) to control grid (pin 6) of V1 and chassis. Feed in a 470 kc/s (638.3 m) signal, and adjust the cores of L14 (location reference B2), L13 (F4), L12 (A2) and L11 (G4) for maximum output. Repeat these adjustments until no further improvement results.

R.F. and Oscillator Stages.—With the gang set to minimum capacitance, the cursor should coincide with the vertical line labelled "MIN" at the top left-hand corner of the tuning scale. Transfer "live" signal generator lead to A socket, via a suitable dummy aerial.

M.W.—Switch receiver to M.W., tune to vertical line labelled "M.W." (or "M" in some receivers) at the top of tuning scale, feed in a 1,550 kc/s (193.6 m) signal and adjust C29 (G3) and C26 (G3) for maximum output. Repeat these adjustments.

L.W.—Switch receiver to L.W. and tune to line labelled "L" at top of tuning scale. Feed in a 180 kc/s (1,675 m) signal and adjust C31 (F3) for maximum output.

S.W.—Switch receiver to S.W., tune to vertical line labelled "S" at top left-hand side of tuning scale, feed in an 18 Mc/s (16.67 m) signal and adjust C30 (G3) for maximum output, choosing the peak involving the lower trimmer capacitance. Also trim C25 at this frequency for maximum output. Tune receiver to vertical line labelled "S" at the top right-hand side of tuning scale, feed in a 6 Mc/s (50 m) signal and adjust the core of L6 (A1) for maximum output. Tune receiver to "S" mark at the top left-hand side of tuning scale, feed in an 18 Mc/s (16.67 m) signal and readjust C30 and C25 for maximum output. Repeat these adjustments until no further improvement results.

Sketch of the tuning drive system, drawn as seen from the rear of the chassis with the gang set at maximum capacitance.

