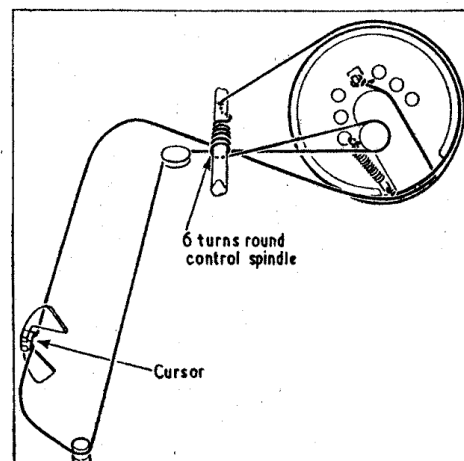


G.E.C. - BC4644

CAPACITORS		Values	Locations
C1	Aerial coupling ...	5pF	D3
C2	L.W. aerial trim....	170pF	E3
C3	M.W. aerial trim....	10pF	D4
C4	V1 C.G. ...	300pF	D4
C5	V1 S.G. decoupling	0.05μF	D4
C6	1st I.F. trans. ...	120pF	B2
C7	tuning ...	120pF	B2
C8	V1 osc. C.G. ...	47pF	E4
C9	Osc. tracker ...	590pF	C2
C10	M.W. osc. trim. ...	22pF	E4
C11	L.W. osc. trim. ...	520pF	D3
C12	Osc. anode coup.	0.005μF	C2
C13	A.G.C. decoupling	0.04μF	E4
C14	V2 cath. by-pass	0.04μF	E4
C15	2nd I.F. trans. ...	120pF	B2
C16	tuning ...	120pF	B2
C17	I.F. by-pass ...	300pF	F4
C18	A.G.C. coupling ...	47pF	F4
C19	A.F. coupling ...	0.04μF	F4
C20	V3 anode decoup.	0.25μF	G4
C21	I.F. by-pass ...	470pF	F4
C22	A.F. coupling ...	0.01μF	F4
C23*	H.T. smoothing ...	32μF	A2
C24*	Tone corrector ...	32μF	A2
C25	Mains R.F. by-pass	0.01μF	B2
C26	M.W. aerial trim.	—	D4
C27†	Aerial tuning ...	—	C2
C28†	Osc. tuning ...	—	C2
C29†	M.W. osc. trim. ...	—	D4

RESISTORS		Values	Locations
R1	Aerial pot. divider {	150kΩ	D3
R2		1.5MΩ	D3
R3	V1 C.G. ...	1MΩ	D4
R4	V1 S.G. feed ...	68kΩ	D4
R5	V1 osc. C.G. ...	100kΩ	D4
R6	Osc. anode feed ...	27kΩ	D4
R7	V2 G.B. ...	470Ω	E4
R8	Volume control ...	1MΩ	A1
R9	V3 C.G. ...	10MΩ	F4
R10	V3 anode decoup.	56kΩ	F3
R11	V3 anode load ...	150kΩ	F4
R12	A.G.C. decoup. ...	1MΩ	E4
R13	A.G.C. diode load	470kΩ	F4
R14	V4 C.G. ...	270kΩ	E4
R15	H.T. smoothing ...	2.7kΩ	B2
R16	V4 C.G. stopper ...	10kΩ	B1
R17	V4 G.B. ...	120Ω	B2

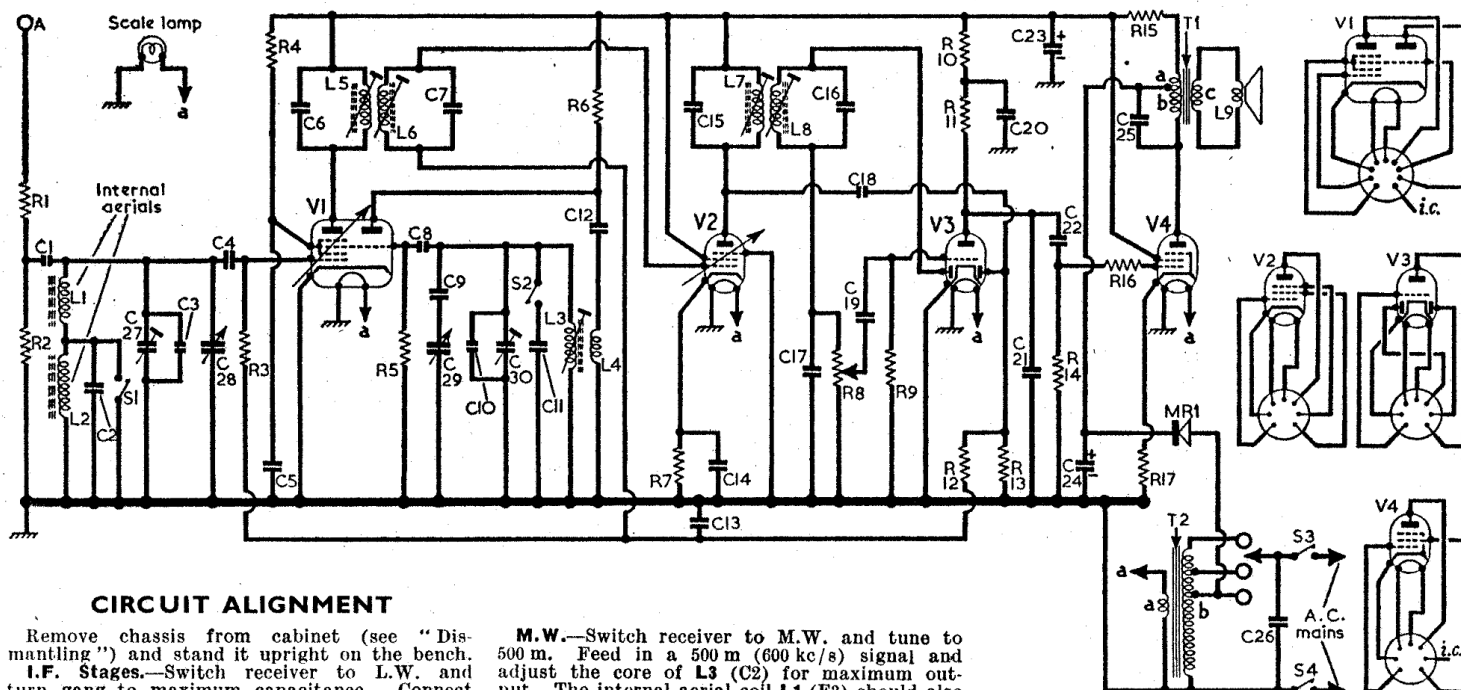
OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Internal aerials ... {	0.8	F3
L2		6.8	E3
L3	Osc. tuning coil ...	2.5	C2
L4	Osc. reaction coup.	0.8	C2
L5	1st I.F. trans. {	8.6	B2
L6		8.6	B2
L7	2nd I.F. trans. {	9.0	B2
L8		9.0	B2
L9	Speech coil	3.0	—
T1	O.P. trans. {	21.0	B1
	a ...	680.0	
	b ...	0.5	
	c ...	0.3	
T2	Mains trans. {	175.0	A2
	a ...	—	
S1, S2	Waveband switches	—	D3
S3, S4	Mains sw., g'd R8	—	A1
MR1	H.T. rect. U480 ...	—	A2



Sketch of the tuning control system as seen from the mains rectifier end of the chassis with the gang set at minimum capacitance.

Valve		Anode		Screen		Cath.
		V	mA	V	mA	
V1	X79	{187 97	{1.5 4.0	57	2.1	—
V2	W77	187	5.3	187	1.4	3.0
V3	DH77	72	0.62	—	—	—
V4	N78	213	27.0	187	4.2	3.6

Intermediate frequency 470 kc/s.



CIRCUIT ALIGNMENT

Remove chassis from cabinet (see "Dis-mantling") and stand it upright on the bench.

I.F. Stages.—Switch receiver to L.W. and turn gang to maximum capacitance. Connect output of signal generator, via an 0.1 μF capacitor in each lead, to control grid (pin 2) of V1 and chassis. Feed in a 470 kc/s (638.3 m) signal and adjust the cores of L8 (location reference B2), L7 (F4), L6 (C2) and L5 (E4). Repeat these adjustments until no further improvement results.

R.F. and Oscillator Stages.—Check that with the gang at maximum capacitance, the cursor lies between the two dots at the high wavelength end of the M.W. scale. Transfer signal generator "live" lead to aerial socket.

M.W.—Switch receiver to M.W. and tune to 500 m. Feed in a 500 m (600 kc/s) signal and adjust the core of L3 (C2) for maximum output. The internal aerial coil L1 (F3) should also be adjusted for maximum output at this frequency by sliding it along the ferrite rod. Tune receiver to 200 m, feed in a 200 m (1,500 kc/s) signal and adjust C30 (D4) and C27 (D4) for maximum output. Repeat these adjustments until no further improvement results.

L.W.—Switch receiver to L.W. and tune to 1,304 m. Feed in a 1,304 m (230 kc/s) signal and adjust the internal aerial coil L2 (E3) for maximum output by sliding it along the ferrite rod.

Drive Cord Replacement.—About 60 inches of nylon braided glass yarn is required for a new drive. With the gang turned to minimum capacitance, one end of the drive cord should be tied to the lug on the drive drum and the cord then run as indicated in the sketch of the tuning drive system below, starting in a clockwise direction on the drum. Finally, before returning to the drum, the cord passes through a hole in the drive spindle.