

# G.E.C. - BC6242

CAPACITORS		Values	Locations
C1	Aerial coupling ...	0.001 $\mu$ F	E4
C2	Chassis isolator ...	0.02 $\mu$ F	D4
C3	Aerial coupling ...	0.008 $\mu$ F	E3
C4	L.W. trimmer ...	82pF	E3
C5	V1 C.G. ...	100pF	E3
C6	1st I.F. trans. tuning ...	120pF	C2
C7		120pF	E2
C8	V1 osc. C.G. ...	100pF	D4
C9	L.W. trimmer ...	100pF	D3
C10	L.W. tracker ...	200pF	D3
C11	M.W. tracker ...	375pF	D3
C12	Osc. anode coup. ...	0.005 $\mu$ F	D3
C13	A.G.C. decoupling ...	0.05 $\mu$ F	E4
C14	S.G. decoupling ...	0.05 $\mu$ F	E4
C15	2nd I.F. trans. tuning ...	120pF	B2
C16		120pF	B2
C17	I.F. by-pass ...	300pF	F4
C18	V.C. earthing ...	0.01 $\mu$ F	H3
C19	A.F. coupling ...	0.02 $\mu$ F	F4
C20*	H.T. decoupling ...	4 $\mu$ F	H3
C21	I.F. by-pass ...	500pF	F4
C22	A.F. coupling ...	0.02 $\mu$ F	G3
C23*	H.T. smoothing ...	32 $\mu$ F	E3
C24*		32 $\mu$ F	E3
C25	Tone correction ...	0.01 $\mu$ F	F3
C26	R.F. filter ...	0.01 $\mu$ F	G4
C27*	V4 cath. by-pass ...	100 $\mu$ F	F3
C28†	M.W. aerial trim. ...	—	D3
C29†	Aerial tuning ...	—	C1
C30†	Osc. tuning ...	—	C2
C31†	M.W. osc. trim. ...	—	D3

RESISTORS		Values	Locations
R1	Aerial shunt ...	1M $\Omega$	E4
R2	V1 C.G. ...	1M $\Omega$	D4
R3	V1 osc. C.G. ...	100k $\Omega$	D4
R4	V1 osc. anode ...	22k $\Omega$	D4
R5	A.G.C. decoupling ...	470k $\Omega$	E4
R6	Volume control ...	1M $\Omega$	G3
R7	S.G. feed ...	39k $\Omega$	F4
R8	V3 C.G. ...	10M $\Omega$	F4
R9	H.T. decoupling ...	18k $\Omega$	G3
R10	V3 anode load ...	100k $\Omega$	G4
R11	V4 C.G. ...	330k $\Omega$	G3
R12	V4 grid stopper ...	100k $\Omega$	G3
R13	H.T. smoothing ...	2.2k $\Omega$	B2
R14	V4 G.B. ...	220 $\Omega$	G3
R15	V5 surge limiter ...	330 $\Omega$	G4

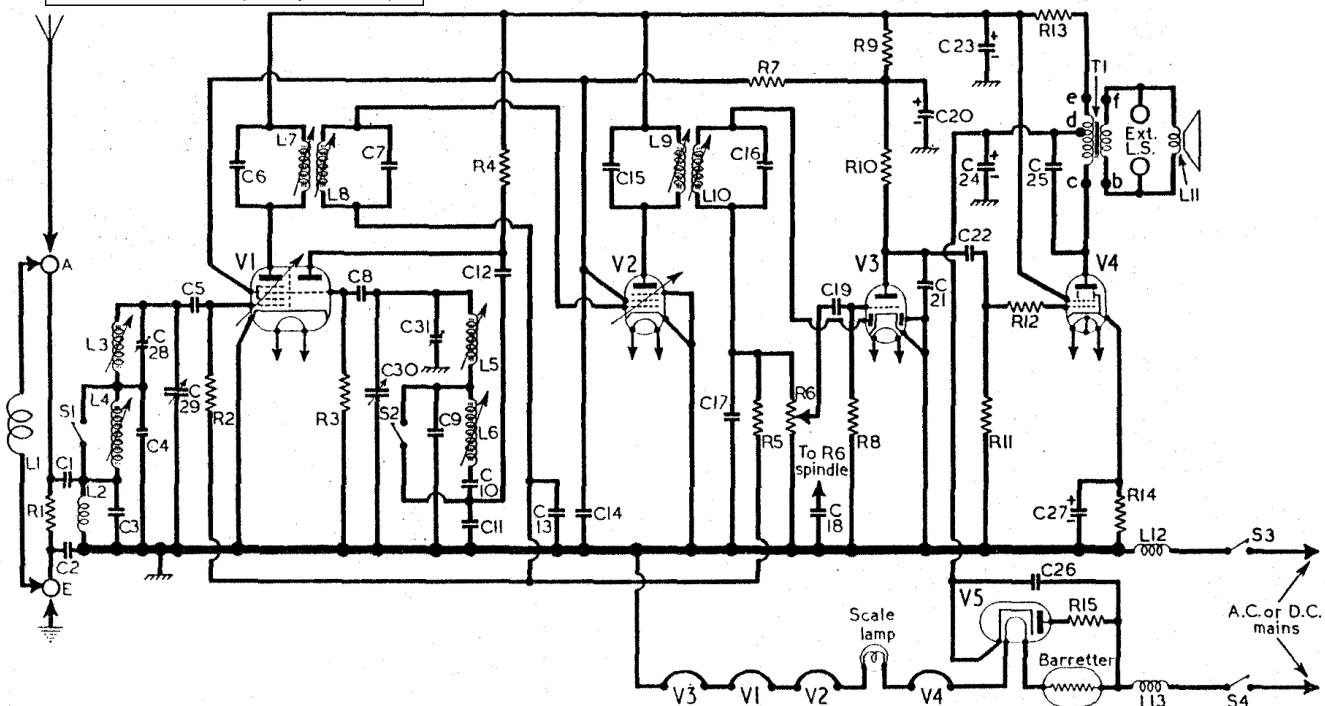
Valve	Anode		Screen		Cath.
	V	mA	V	mA	V
V1 X61M	152	0.6	32	1.0	—
V2 KTW61	102	2.4	—	—	—
V3 DH63	152	4.0	32	1.0	—
V4 KT33C	66	0.4	—	—	—
V5 U31 ...	173	42.0	152	6.0	10.5
	210†	—	—	—	186.0

OTHER COMPONENTS		Approx. Values (ohms)	Locations
L1	Frame aerial ...	Very low	—
L2	R.F. choke ...	50.0	E3
L3	Aerial tun. coils ...	2.25	E3
L4		17.0	E3
L5	Oscillator tun. coils ...	3.0	D3
L6		7.5	D3
L7	1st I.F. trans. { Pri. ...	9.5	C2
L8	trans. { Sec. ...	9.5	C2
L9	2nd I.F. trans. { Pri. ...	9.5	B2
L10	trans. { Sec. ...	9.5	B2
L11	Speech coil ...	3.2	—
L12	Mains filter chokes ...	2.8	H4
L13		2.8	H4
T1	Primary c-d ...	25.0	—
S1, S2	Primary d-c ...	360.0	B2
S3, S4	Secondary ...	0.6	—
	Waveband switches	—	E3
	Mains sw., g'd R6	—	G3

**Drive Cord Replacement.**—The total length of the tuning drive cable in our sample was 40in overall when made up, consisting of 15in of wire, and 25in of cord, the two being tied together where they met at the cursor carriage. The course they take is shown in the sketch above, where the system is drawn as seen from the front with the gang at maximum.

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

Intermediate frequency 470kc/s



## CIRCUIT ALIGNMENT

**I.F. Stages.**—These adjustments may be carried out with the chassis in the cabinet upon disconnecting the frame aerial and removing the back and base covers. Switch set to L.W.; tune to 2,000 m and turn volume control to maximum. Connect signal generator, via a 0.1 $\mu$ F capacitor in each lead, to control grid (top cap) of V2 and chassis.

Feed in a 470 kc/s (638.3 m) signal and adjust the cores of L10 (location reference B2) and L9 (F4) for maximum output. Transfer "live" lead to control grid (top cap) of V1, and adjust the cores of L8 (C2) and L7 (E4) for maximum output. During these adjustments, reduce the input as the circuits come into line to avoid A.G.C. action.

**R.F. Stages.**—To make these adjustments accessible, the chassis should be withdrawn from the cabinet and placed on the bench, and as the tuning scale remains in the cabinet, alignment is carried out with reference to the printed scale on the metal bracket carrying the cursor

carriage. Readings on this scale are taken against the top edge of the cores of L5 (C2) and L3 (C1) for maximum output. Transfer signal generator leads to A and E sockets, leaving the frame aerial disconnected.

**M.W.**—Switch set to M.W., tune to 70.0 on substitute scale, feed in a 500 m (600 kc/s) signal and adjust the cores of L5 (C2) and L3 (C1) for maximum output. Tune to 10.5 on scale, feed in a 214.3 m (1.4 Mc/s) signal and adjust C31 (D3) and C28 (D3) for maximum output. Repeat these adjustments.

**L.W.**—Switch set to L.W., tune to 32.5 on scale, feed in a 1,304 m (230 kc/s) signal and adjust the cores of L6 (C1) and L4 (C1) for maximum output. Repeat these adjustments.