

G.E.C. - BC4835R

CAPACITORS		Values (μ F)
C1	Aerial isolator ...	0.001
C2	Earth isolator ...	0.04
C3	Aerial coupling capacitor ...	0.003
C4	V1 hex. C.G. capacitor ...	0.0005
C5	V1 osc. C.G. capacitor ...	0.0001
C6	H.T. circuit R.F. by-pass ...	0.05
C7	Osc. M.W. fixed tracker ...	0.0001
C8	Osc. L.W. fixed trimmer ...	0.000039
C9	Osc. circ. S.W. tracker ...	0.00395
C10	Reaction coupling ...	0.005
C11	V1, V2 S.G.'s decoupling ...	0.05
C12	V1, V2, V3 cathode by-pass ...	0.25
C13	I.F. by-pass capacitor ...	0.0003
C14	Isolating capacitor ...	0.001
C15	V3 A.V.C. diode coupling ...	0.000022
C16	A.F. coupling to V3 triode ...	0.005
C17	A.V.C. line decoupling ...	0.05
C18	V3 anode I.F. by-pass ...	0.0003
C19	A.F. coupling to V4 C.G. ...	0.01
C20	Fixed tone corrector ...	0.02
C21	Mains R.F. by-pass ...	0.01
C22*	H.T. smoothing capaci-	16.0
C23*	tors ...	32.0
C24†	Aerial circ. S.W. trimmer ...	—
C25†	Aerial circ. M.W. trimmer ...	—
C26†	Aerial circ. L.W. trimmer ...	—
C27†	Aerial circuit tuning ...	—
C28†	Oscillator circuit tuning ...	—
C29†	Osc. circ. S.W. trimmer ...	—
C30†	Osc. circ. M.W. trimmer ...	—
C31†	Osc. circ. L.W. trimmer ...	—
C32†	Osc. circ. L.W. tracker ...	—
C33†	Osc. circ. M.W. tracker ...	—
C34†	1st I.F. trans. pri. tuning ...	—
C35†	1st I.F. trans. sec. tuning ...	—
C36†	2nd I.F. trans. pri. tuning ...	—
C37†	2nd I.F. trans. sec. tuning ...	—

* Electrolytic. † Variable. ‡ Pre-set.
§ 2 x 0.02 μ F in parallel.

RESISTORS		Values (ohms)
R1	V1 hex. C.G. resistor ...	680,000
R2	V1 osc. C.G. resistor ...	100,000
R3	Oscillator circuit stabilis-	68
R4		
R5	V1 osc. anode H.T. feed ...	12,000
R6	Oscillator stabiliser ...	10,000
R7	V1, V2 S.G.'s H.T. feed ...	27,000
R8	V1, V2, V3 G.B. resistor ...	150
R9	Manual volume control ...	1,000,000
R10	V3 triode C.G. resistor ...	10,000,000
R11	V3 triode anode load ...	100,000
R12	A.V.C. line decoupling ...	680,000
R13	V3 A.V.C. diode load ...	1,000,000
R14	V4 C.G. resistor ...	470,000
R15	V4 grid stopper ...	82,000
R16	V4 G.B. resistor ...	330
R17	H.T. smoothing resistor ...	2,700
R18	V5 anode surge limiter ...	330

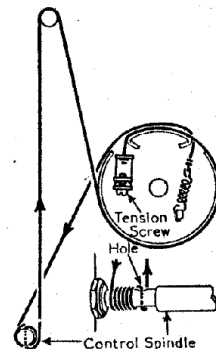
OTHER COMPONENTS		Approx. Values (ohms)
L1	Aerial circuit shunt ...	60.0
L2	Aerial S.W. coupling coil ...	0.36
L3	Aerial S.W. tuning coil ...	0.06
L4	Aerial M.W. tuning coil ...	2.46
L5	Aerial L.W. tuning coil ...	19.5
L6	Osc. S.W. tuning coil ...	0.06
L7	Osc. M.W. tuning coil ...	3.4
L8	Osc. L.W. tuning coil ...	7.7
L9	Osc. S.W. reaction coil ...	0.32
L10	1st I.F. trans. { Pri. ...	7.0
L11		7.0
L12	2nd I.F. trans. { Pri. ...	4.0
L13		4.0
L14	Speaker speech coil ...	2.25
T1	Speaker input { Pri., a-b ...	25.0
	trans. { Sec., b-c ...	270.0
S1-S4	Waveband switches ...	—
S5	Mains switch, ganged R9 ...	—

DRIVE CORD REPLACEMENT

Remove tuning scale, waveband indicator and tuning ribbon; turn gang to minimum, where drum should be in position shown in sketch where it is viewed from the front. 30in of cord is sufficient.

Tie one end of cord securely to the spring, and hook spring to anchor tag, take cord through gap as shown and down to control spindle

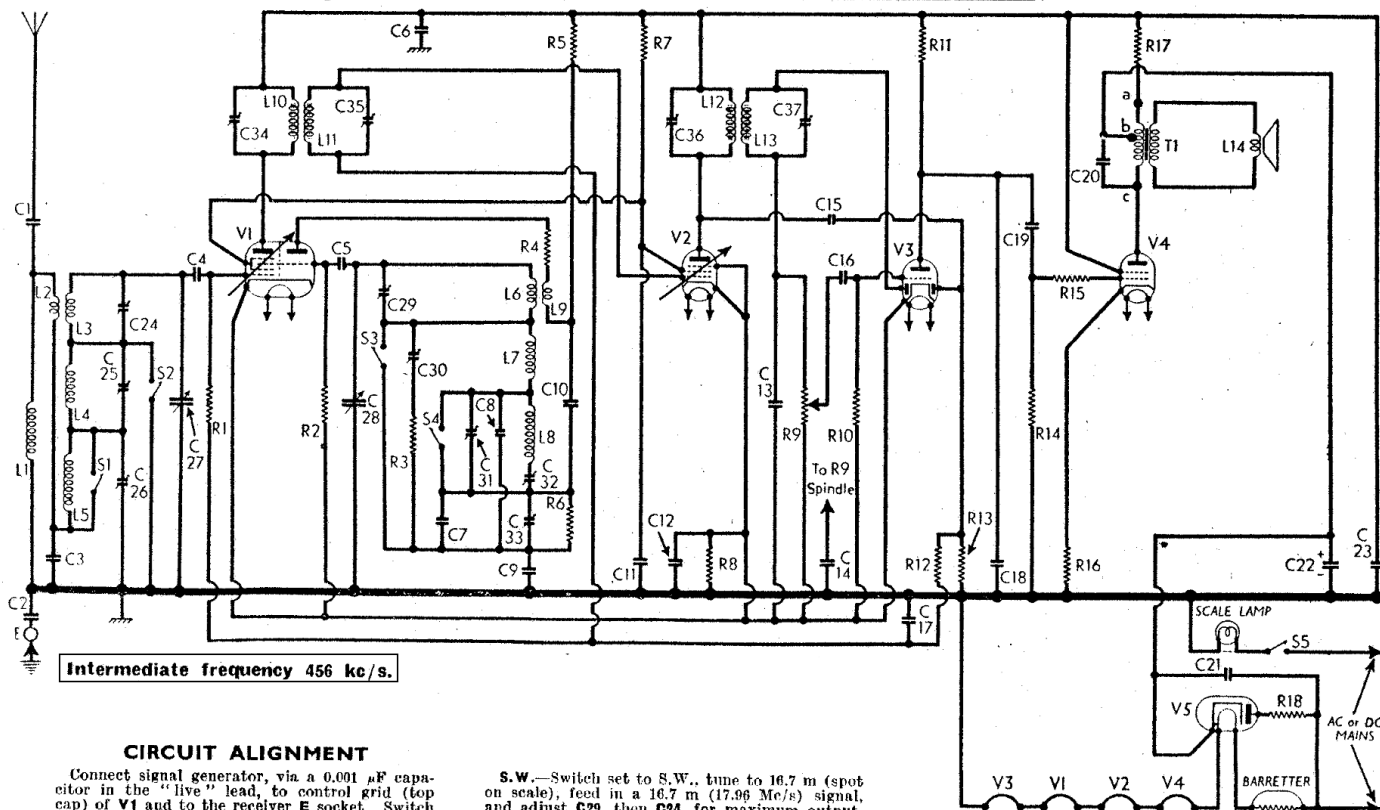
Sketch of the cord drive system, as seen from the front with the gang at minimum. Inset is a side view of the control spindle, showing the turns round it.



winding on six turns anti-clockwise as shown in side view of spindle. See that small hole in spindle is vertical, then thread cord downwards through it, continuing with a further half-turn anti-clockwise and up over top pulley and back to drum, tying off with a knot inside finishing bracket. Tension may then be adjusted by screw. Attach tuning ribbon clamp and adjust as explained in "Circuit Alignment."

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 X76M	150	1.7	58	2.5
V2 W76	90	4.0	—	—
V3 DH76	150	4.0	58	1.0
V4 KT76	72	0.74	—	—
V5 U76†	104	28.0	150	4.4

† Cathode to chassis, 202 V, D.C.



CIRCUIT ALIGNMENT

Connect signal generator, via a 0.001 μ F capacitor in the "live" lead, to control grid (top cap) of V1 and to the receiver E socket. Switch set to L.W., tune to 2,000 m on scale, and turn the volume control to maximum.

Feed in a 456 kc/s (657.8 m) signal and adjust C37, C36, C35 and C34, in that order, for maximum output, keeping the input low to avoid A.V.C. action.

R.F. and Oscillator Stages.—Transfer signal generator "live" output lead to remote end of attached aerial, connecting it via a suitable dummy aerial. With the gang at minimum capacitance the junction of the two-colour ribbon indicator should be horizontal and appear 5in below the bottom edge of the register window.

S.W.—Switch set to S.W., tune to 16.7 m (spot on scale), feed in a 16.7 m (17.96 Mc/s) signal, and adjust C29, then C24, for maximum output, choosing the setting of C29 involving the lesser trimmer capacitance. The final adjustment to C24 should be accompanied by slight readjustment of the gang, to obtain maximum output.

M.W.—Switch set to M.W., tune to 214 m (spot on scale), feed in a 214 m (1,400 kc/s) signal, and adjust C30, then C25, for maximum output. Tune to 500 m on scale, feed in a 500 m (600 kc/s) signal, and adjust C33 for maximum output while rocking the gang. Finally, repeat the 214 m adjustments.

L.W.—Switch set to L.W., tune to 1,000 m on scale, feed in a 1,000 m (300 kc/s) signal, and adjust C31, then C26, for maximum output. Tune to 1,818 m (spot on scale), feed in a 1,818 m (165 kc/s) signal, and adjust C32 for maximum output while rocking the gang. Finally, repeat the 1,000 m adjustments and reset all trimmers with a suitable compound.