

G.E.C. 4046

Four-valve, two-band, push-button superhet operating from 2v. 30 ah., accumulator and 120 v. H.T. battery (Genalex BC230G accumulator and “Super” BB820 battery are recommended.)

Circuit.—The aerial is loosely coupled to a single circuit feeding an X22 frequency changer. Aerial and oscillator circuits are tuned by a two-gang condenser with separate parallel and oscillator pad condensers for each band.

The I.F. valve, a W21, is followed by an HD23 for second detection, A.V.C. and L.F. amplification. This is resistance-capacity coupled to a KT21 output valve.

Standing bias for X22, W21 and A.V.C. delay is obtained from R13 in the negative H.T. lead. Bias for the output stage is produced across R14 + R13.

Fuse bulb: Osram G.E.C. 3.5v. .15 amp. M.E.S. 12mm. diameter.

Total L.T. consumption, .7 amp. H.T. consumption, 10.5 ma.

Wavebands: 192-550, 1,000-2,000 metres. Mechanical push-button tuning is provided.

Provision is made for a 2-4 ohm extension speaker.

Battery connections: H.T.+, red, 120v.; H.T.—, white; L.T.+, red; L.T.—, black.

Replacing drive cord.—Set gang to max. Attach one end of cord to spring, slip over hook on face of drum, lead cord out of slot opposite, clockwise round lower run, through hole in chassis, over four guide pulleys and back round drum half a turn clockwise. Then through remaining slot to tension adjustment.

Indicator Ribbon.—Detach original ribbon by releasing tension spring and fit replacement.

Replace chassis and set gang condenser to maximum. Adjust ribbon so that junction of red and yellow sections coincides with the marks just below top of register aperture and secure drive cord under clamp provided.

GANGING

I.F. Circuits.—Switch to L.W., turn tuning and volume to maximum and tone to brilliant.

Inject through .1 mfd. condenser to X22 grid and adjust I.F. trimmers for maximum at 456 kc. Reduce input progressively as circuits come into line.

M.W. Band.—Adjust T3 and T1 at 214 metres.

Adjust T6 at 500 metres, rocking gang slightly.

L.W. Band.—Adjust T4 and T2 at 1,000 metres.

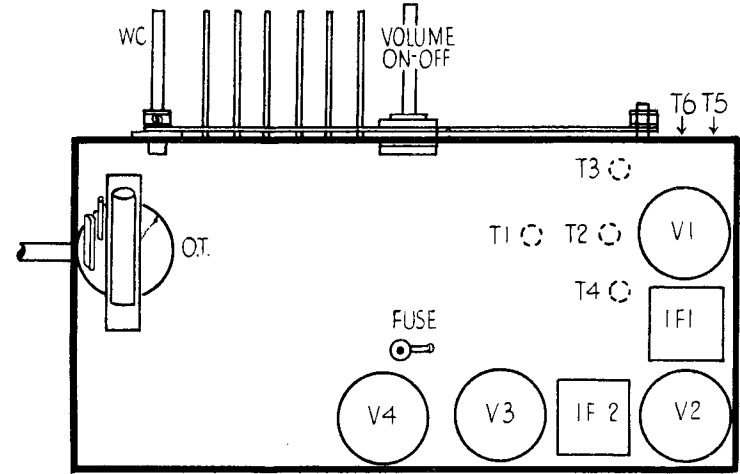
Adjust T5 at 1,818 metres, rocking gang slightly.

BUTTON ADJUSTMENT

Turn pointer fully anti-clockwise. Slacken locking screw by one turn in anti-clockwise direction. Switch to required waveband.

Tune to required station, do not release. Depress station button to full extent. Release both station button and tuning control. Repeat procedure for other buttons.

Turn pointer fully clockwise and tighten locking spindle.



A point to note is that when replacing components similar types to the originals should be used. This applies, for example, to insulated resistors and silver mica condensers.

VALVE VOLTAGES

V	Type	Electrode	Volts	Ma.
1	X22	Anode	106	.55
		Screen	53	1.4
2	W21	Osc. anode	53	1.4
		Anode	103	1.13
3	HD23	Screen	106	.42
4	KT21	Anode	66	.22
		Screen	110	4.5
		Screen	117	.9

RESISTANCES

R	Ohms	R	Ohms
1	9,900	11	330,000
2	1 meg.	12	99,000
3	99,000	13	150
4	33,000	14	100
5	33,000	15	440,000
6	440,000	16	33,000
7	55,000	17	55,000
8	440,000	18	2 meg.
9	440,000	19	2,200
10	1 meg.		

CONDENSERS

C	Mfds.	C	Mfds.
1	.095	10	.00005
2	.003	11	.25
3	20 mmfds.	12	.02
4	50 mmfds.	13	.0003
5	.005	14	.30
6	.05	15	.002
7	.05	16	.02
8	.0003	17	.25
9	.02		

WINDINGS

L	Ohms.	L	Ohms.
1	2.2	Speech coil	2.16
2	22	O.T. primary	1,530
3	3	O.T. secondary	.38
4	6	I.F.1 Pand S	7
5	1.3	I.F.2 Pand S	4
6	1.6		

