

G.E.C. 4056 4066

Five-valve, battery operated super-het, table models, covering three wavebands, with quiescent push-pull output and mechanical push-button tuning. Made by the General Electric Co., Ltd., Magnet House, Kingsway, London, W.C.2.

Circuit.—The aerial is loosely-coupled to a single tuned circuit feeding 1, the frequency-changer. The oscillator circuit is straightforward with separate trimming and padding condensers for each band. Iron-cored I.F. transformers with trimmer condensers couple V2, the I.F. amplifier, and V3, a double-diode triode.

Signal and A.V.C. diode arrangements are conventional, P.U. sockets being across the diode load. A delay bias is given the A.V.C. diode. The V3 triode section feeds the push-

pull output valves, V4 and V5, through a resistance-condenser-fed transformer.

Separate bias adjustment for each output valve is provided on the R17-R21 potentiometer. Valves and connections are letter coded.

Model BC4066 is for use with 150+9 v. H.T. battery; BC4056 is for 135 v. unit with separate 9 v. G.B. unit. Dial lamps are controlled by a switch, actuated by the tuning knob in BC4056 and by the volume control in BC4066.

BATTERY CONNECTIONS.—H.T. +, red, 135 v. (150 v., BC4066); H.T. —, white; L.T. +, red; L.T. —, black; G.B. + (BC4056 only), white; G.B. —, yellow; —9 v.

GANGING

I.F. CIRCUITS.—Inject 456 kc. and adjust I.F. trimmers for maximum.

CALIBRATION.—Check that pointer registers with mark at end of scale with gang at maximum.

M.W. BAND.—Inject 214 m., adjust T5 and T2. Inject 500 m., and pad with T8. Readjust T5 and T2.

M.W. BAND.—Inject 1,000 m., adjust T6 and T3. Inject 1,818 m. and pad with T7. Readjust T6 and T3.

S.W. BAND.—Inject 16.7 m., adjust T4 and T1. Rock gang slightly if pulling is experienced and see that T4 is at lowest capacity peak.

PUSH-BUTTONS

Tune manually until pointer is fully anti-clockwise. With screwdriver, slacken locking screw by one complete turn anti-clockwise. Depress required waveband button.

Tune in required station manually and hold knob in. Depress station push-button to full extent. Release both button and tuning control. Repeat procedure for further buttons.

Turn pointer fully clockwise. Tighten locking spindle. Check all settings and fit new station names.

RESISTANCES

R	Ohms.	R	Ohms.
1	99,000	13	440,000
2	1 meg.	14	99,000
3	44,000	15	99,000
4	99,000	16	55,000
5	6,600	17	150
6	5,500	18	450
7	33,000	18 (BC4066)	500
8	440,000	19	50
9	55,000	20	50
10	440,000	21	100
11	1 meg.	21 (BC4066)	25
12	99,000	22 (BC4066)	2 200

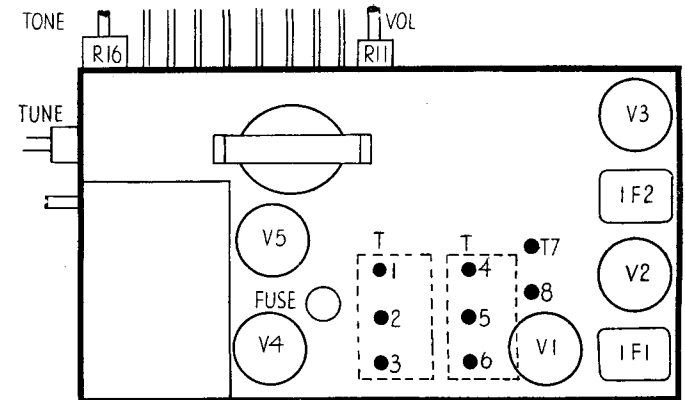
CONDENSERS

C	Mfds.	C	Mfds.
1	20 mmfds.	12	.0001
2	.003	13	.02
3	.0005	14	.0001
4	.25	15	.00005
5	.25	16	.25
6	.0001	17	.0002
7	40 mmfds.	18	.05
8	.00395	19	.001
9	.005	20	.001
10	.05	21	.005
11	.02		

WINDINGS

L	Ohms.	L	Ohms.
1	.3	5	.4
2	.08	7	2.7
3	.2	8	.8
4	.22	10	1.2

Continued in Column 5



Above, layout diagram identifying main features of the G.E.C. chassis and indicating trimmers, both those on top and below.

Two output valves are used in push-pull. Bias is automatic and the output valves are letter coded so that the anode currents are properly matched.

WINDINGS—Contd.

L	Ohms.	L	Ohms.
11	2.8	O.T. (P.)	900+750
I.F. 1 (P. & S.)	7	O.T. (S.)	.2
I.F. 2 (P. & S.)	4	Speech coil	2.3
L.F.T. (P.)	630	„ (BC4066)	2
L.F.T. (S.)	1,470—1,900		

VALVE READINGS

V	Type.	Electrode.	Volts.	Ma.
1	X22	Anode	120	.8
		Screen	59	1.6
		Osc. anode	55	1.4
2	W21	Anode	135	1.5
		Screen	120	.5
3	HD23	Anode	70	.25
4 & 5	KT2	Anode	133	1.4
		Screen	135	.3
4 & 5*	KT2	Anode	148	1.4
		Screen	150	.3

*Readings in model BC4066.

Dial lamps: Osram 2v. .6 amp. 11 mm. M.E.S. clear round.

Fuse: Osram 3.5v. .15 amp. 12 mm. M.E.S.

Speaker Switch Caused Howling

A MURPHY console was brought in with a report of "Loud howling." Tapping the chassis brought the howl on and off, so it was obviously a bad joint.

The cause was narrowed down to the output circuit by removing the valves in rotation. An inspection of the output circuit revealed that the jack plug fitted on the external speaker sockets was intermittently making contact, the vibration from the speaker causing a microphonic effect.

The cure, of course, was obvious and made a permanent success of the set.—G. P. WALKER, Bolton, Lancs.

