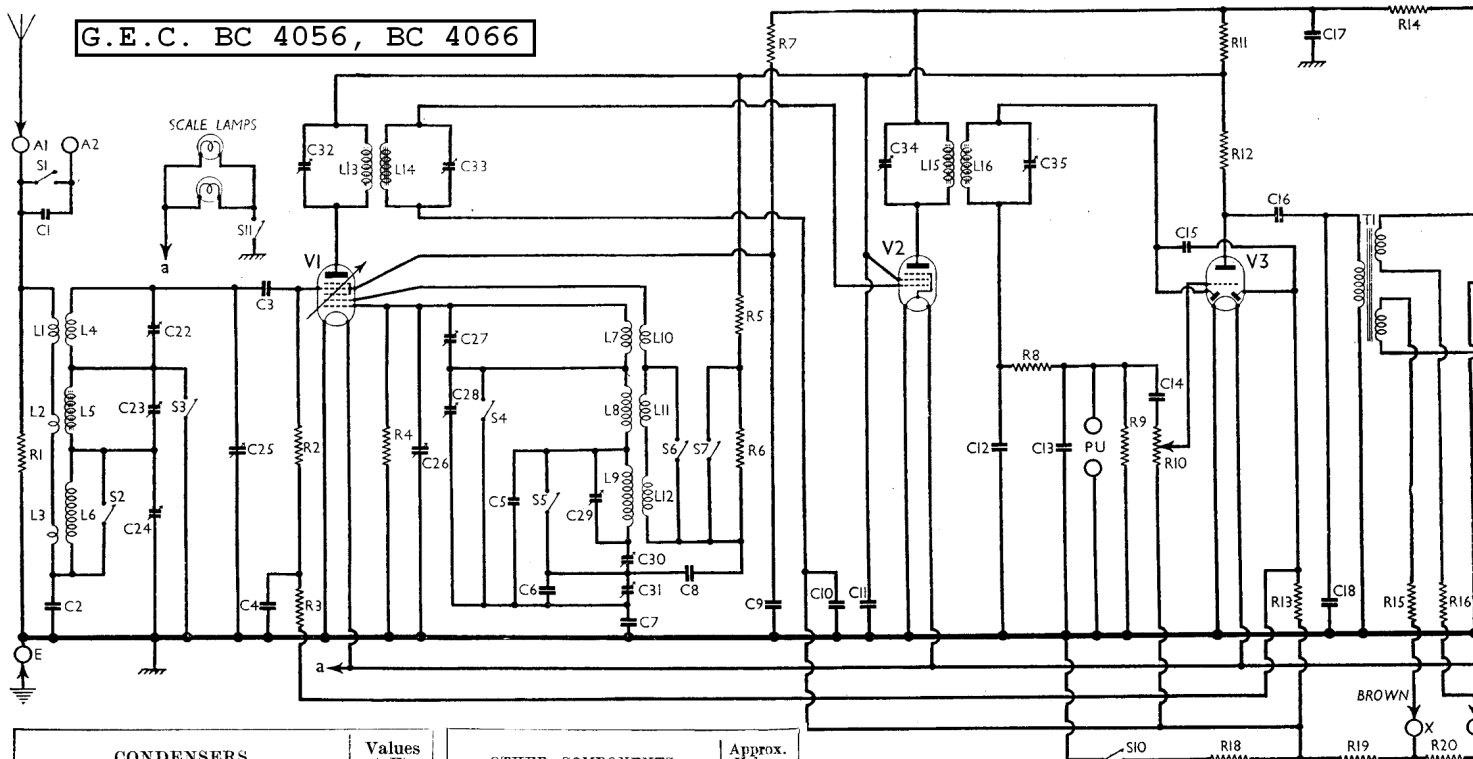


G.E.C. BC 4056, BC 4066



CONDENSERS	Values (μF)
C1 A2 aerial series condenser ...	0.00002
C2 Aerial MW and LW coupling ...	0.003
C3 V1 tetrode CG condenser ...	0.0005
C4 V1 tetrode CG decoupling ...	0.05
C5 Osc. circuit LW fixed trimmer ...	0.00004§
C6 Osc. circuit MW fixed tracker ...	0.0001
C7 Osc. circuit SW tracker ...	0.00395
C8 Part reaction coupling ...	0.005
C9 V1 SG decoupling ...	0.25
C10 V2 CG decoupling ...	0.02
C11 V1 anodes, V2 SG and V3 anode RF by-pass ...	0.25
C12 IF by-pass condensers ...	0.0001
C13 IF by-pass condensers ...	0.0001
C14 AF coupling to V3 triode ...	0.02
C15 Coupling to V3 AVC diode ...	0.00005
C16 AF coupling to T1 ...	0.25
C17 HT circuit RF by-pass ...	0.05
C18 IF by-pass ...	0.0002
C19 Part of variable tone control ...	0.005
C20 Fixed tone correctors ...	0.001
C21 Fixed tone correctors ...	0.001
C22 Aerial circuit SW trimmer ...	—
C23 Aerial circuit MW trimmer ...	—
C24 Aerial circuit LW trimmer ...	—
C25 Aerial circuit tuning ...	—
C26 Oscillator circuit tuning ...	—
C27 Osc. circuit SW trimmer ...	—
C28 Osc. circuit MW trimmer ...	—
C29 Osc. circuit LW trimmer ...	—
C30 Osc. circuit LW tracker ...	—
C31 Osc. circuit MW tracker ...	—
C32 1st IF trans. pri. tuning ...	—
C33 1st IF trans. sec. tuning ...	—
C34 2nd IF trans. pri. tuning ...	—
C35 2nd IF trans. sec. tuning ...	—

OTHER COMPONENTS	Approx. Values (ohms)
L1 Aerial circuit SW coupling coil ...	0.3
L2 Aerial circuit MW coupling coil ...	Very low
L3 Aerial circuit LW coupling coil ...	Very low
L4 Aerial circuit SW tuning coil ...	0.08
L5 Aerial circuit MW tuning coil ...	2.0
L6 Aerial circuit LW tuning coil ...	22.0
L7 Osc. circuit SW tuning coil ...	2.7
L8 Osc. circuit MW tuning coil ...	8.0
L9 Osc. circuit LW tuning coil ...	0.4
L10 Oscillator SW reaction coil ...	1.2
L11 Oscillator MW reaction coil ...	2.8
L12 Oscillator LW reaction coil ...	7.0
L13 1st IF trans. Pri. ...	7.0
L14 1st IF trans. Sec. ...	4.0
L15 2nd IF trans. Pri. ...	4.0
L16 2nd IF trans. Sec. ...	2.0
L17 Speaker speech coil ...	2.0

OTHER COMPONENTS (Continued)	Approx. Values (ohms)
T1 Interval trans. Pri. ...	630.0
T1 Interval trans. Sec. 1 ...	1470.0
T1 Interval trans. Sec. 2 ...	1900.0
T2 Output trans. Pri. total ...	1650.0
T2 Output trans. Sec. ...	0.2
S, S7 Waveband switches ...	—
S8 HT circuit switch ...	—
S9 LT circuit switch ...	—
S10 GB circuit switch ...	—
S11 Scale lamps switch ...	—
F1 HT circuit fuse lamp ...	—

VALVE ANALYSIS

Valve voltages and currents given in the table (col. 2) are those measured in our receiver when it was operating with an HT and GB battery reading 159 V overall on load. The receiver was tuned to the lowest wavelength on the medium band and the volume control was at maximum, but there was no signal input.

Voltages were measured on the 400 V scale of a model 7 Universal Avometer, chassis being negative.

Valve	Anode Voltage (V)	Anode Current (mA)	Screen Voltage (V)	Screen Current (mA)
V1 X22	120	0.7	GO	1.6
V2 W21	57	1.25	120	0.5
V3 HD23	135	1.7	120	0.5
V4 KT2	148	1.4	150	0.3
V5 KT2	148	1.4	150	0.3

CIRCUIT ALIGNMENT

A removable panel is fitted to the bottom of the cabinet so that complete alignment can be carried out without removing the chassis from the cabinet.

IF Stages.—Switch set to LW and turn gang to maximum. Turn volume control to maximum. Connect signal generator via a 0.1 μF condenser to grid (top cap) of V1 and chassis. Leave existing top cap connection in place.

Feed in a 456 KC/S signal, and adjust C32, C33, C34 and C35 for maximum output.

RF and Oscillator Stages.—Check that the pointer is straight, and coincides with the mark at the high wavelength end of the scale when the gang is at maximum. Connect signal generator via a suitable dummy aerial to the A2 and earth sockets.

MW.—Switch set to MW, tune to 214 m on scale, feed in a 214 m (1,400 KC/S) signal, and adjust C28, then C23, for maximum output.

SW.—Switch set to SW, tune to 16.7 m on scale, feed in a 16.7 m (18 MC/S) signal (via a SW dummy aerial); and adjust C27, then C22, for maximum output. C27 should be adjusted to the higher frequency peak (lower capacity). If "pulling" is experienced when C22 is adjusted, rock the gang slightly to compensate for this.

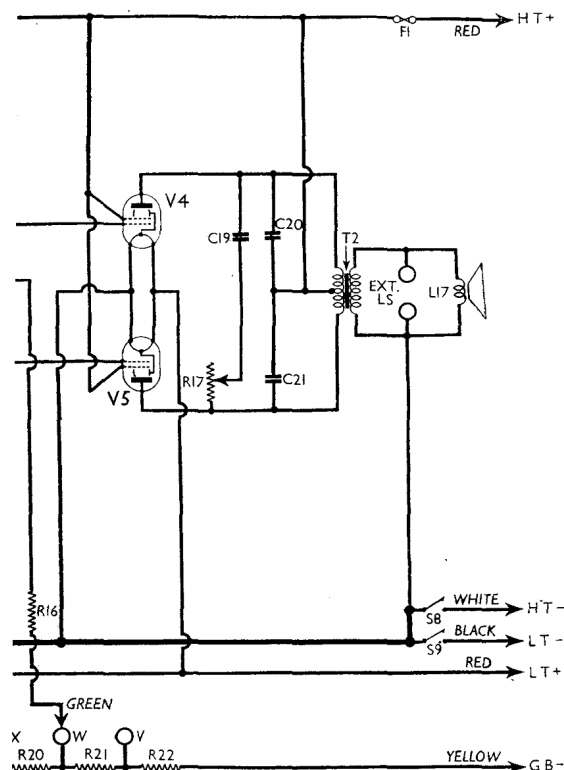
RF and Oscillator Stages.—Check that the pointer is straight, and coincides with the mark at the high wavelength end of the scale when the gang is at maximum. Connect signal generator via a suitable dummy aerial to the A2 and earth sockets.

MW.—Switch set to MW, tune to 214 m on scale, feed in a 214 m (1,400 KC/S) signal, and adjust C28, then C23, for maximum output.

Disconnect C26 by unsoldering the lead from its fixed plates, and connect an external variable condenser between the disconnected lead and chassis. Feed in a 500 m (600 KC/S) signal, and adjust external condenser and receiver tuning control together for maximum output. Disconnect external condenser and re-connect C26. Without altering tuning control setting, adjust C31 for maximum output. Repeat the 214 m adjustments.

LW.—Switch set to LW, and tune to 1,000 m on scale. Feed in a 1,000 m (300 KC/S) signal, and adjust C29, then C24, for maximum output.

Disconnect C26 as before, and connect external condenser. Feed in a 1,318 m (165 KC/S) signal, and adjust external condenser and receiver tuning control together for maximum output. Disconnect external condenser, re-connect C26, and without altering tuning control setting, adjust C30 for maximum output. Repeat the 1,000 m adjustments.



RESISTANCES	Values (ohms)
R1 Aerial circuit shunt ...	9,900
R2 V1 tetrode CG resistance ...	1,000,000
R3 V1 tetrode CG decoupling ...	440,000
R4 V1 osc. CG resistance ...	99,000
R5 V1 osc. anode HT feed resistance ...	5,500
R6 V1 osc. anode HT feed resistance ...	38,000
R7 V1 SG HT feed ...	44,000
R8 IF stopper ...	55,000
R9 V3 signal diode load ...	440,000
R10 Manual volume control ...	1,000,000
R11 V1 anodes, V2 SG and V3 HT feed ...	6,600
R12 V3 triode anode load ...	99,000
R13 V3 AVC diode load ...	440,000
R14 V1, V2, V3 HT feed resistance ...	2,200
R15 V5 CG decoupling ...	99,000
R16 V4 CG decoupling ...	99,000
R17 Variable tone control ...	55,000
R18 V1 fixed GB; V2, V3, V4 and V5 GB potential divider resistances ...	150
R19 V1 fixed GB; V2, V3, V4 and V5 GB potential divider resistances ...	50
R20 V1 fixed GB; V2, V3, V4 and V5 GB potential divider resistances ...	50
R21 V1 fixed GB; V2, V3, V4 and V5 GB potential divider resistances ...	50
R22 V1 fixed GB; V2, V3, V4 and V5 GB potential divider resistances ...	25

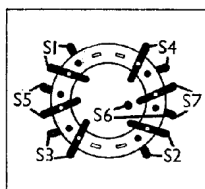


Diagram of the S1-S7 switch unit, viewed from the coil unit side

Switch	LW	SW	MW
S1	C	—	—
S2	—	C	—
S3	—	—	C
S4	—	—	—
S5	—	—	—
S6	—	—	—
S7	—	—	—