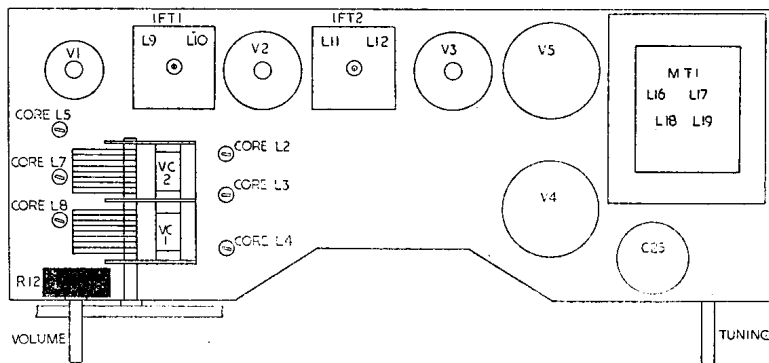
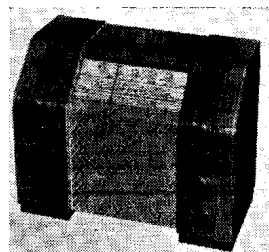
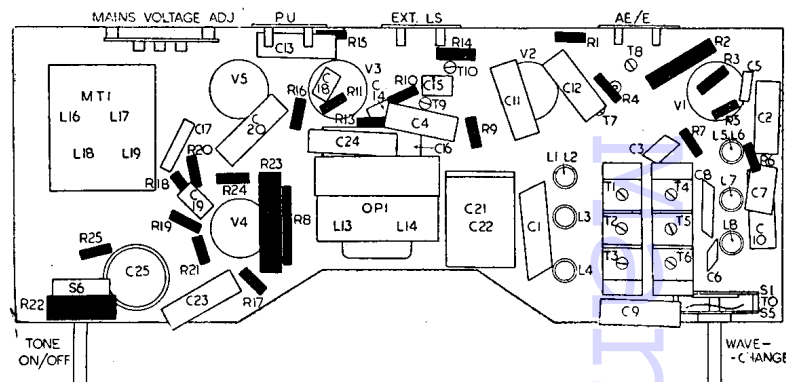


# GEC BC 5050



Five-valve, three-waveband table superhet with sockets for aerial, earth, high-impedance pickup and low-impedance extension loudspeaker. For 190-260V, 40-60 c/s AC mains. Figured walnut veneered cabinet. Made by The General Electric Co., Ltd., Magnet House, Kingsway, London, WC1.

Circuit description and alignment notes, see page 16



### RESISTORS

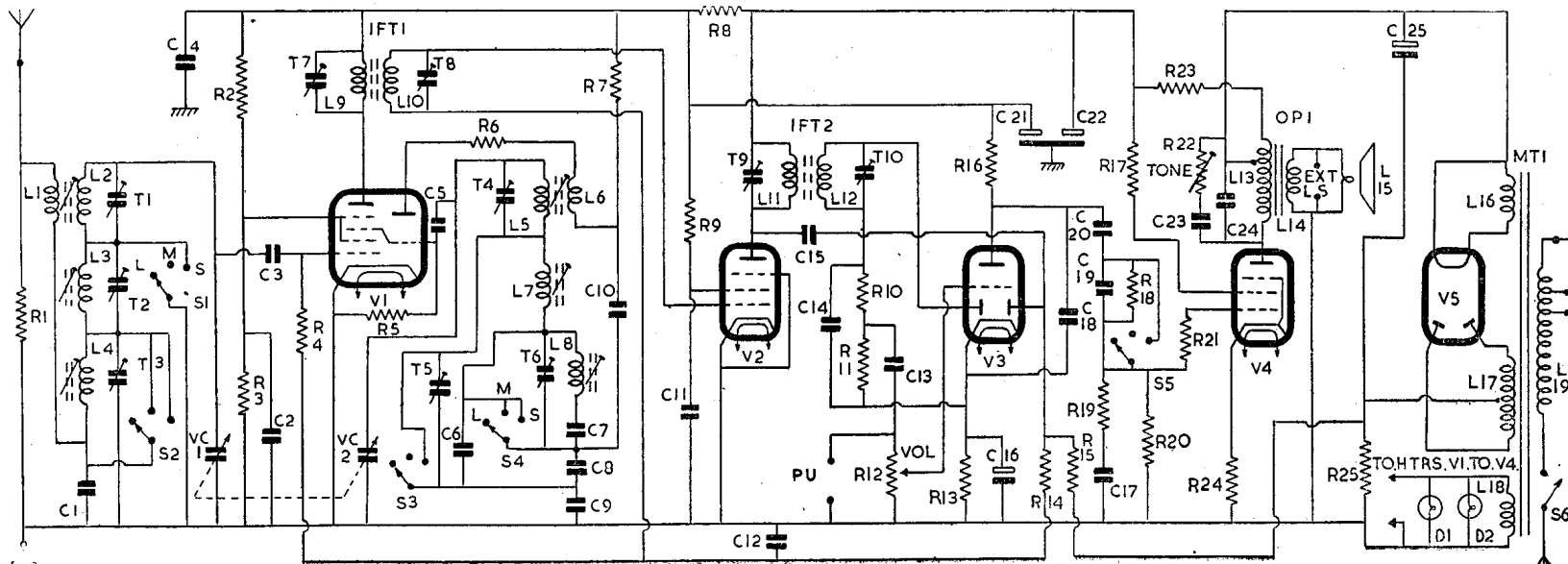
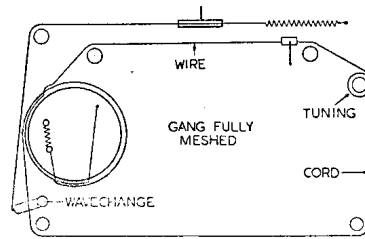
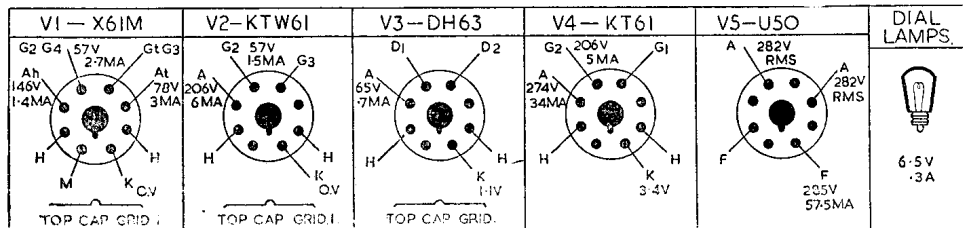
R	Ohms	Watts
1	10K	1/4
2	15K	1
3	22K	1/4
4	1M	1/4
5	100K	1/4
6	390	1/4
7	22K	1/4
8	4.7K	1/4
9	56K	1/4
10	56K	1/4
11	470K	1/4
12	1M	Potr.
13	2.2K	1/4
14	1M	1/4
15	470K	1/4
16	100K	1/4
17	100	1/4
18	680K	1/4
19	150K	1/4
20	330K	1/4

### CAPACITORS

C	Capacity	Type
1	3950pF	Silver Mica
2	.05 Tubular	500V
3	100pF	Mica
4	.03 Tubular	500V
5	100pF	Mica
6	39pF	Silver Mica
7	270pF	Silver Mica
8	430pF	Silver Mica
9	3950pF	Silver Mica
10	.005 Tubular	1000V
11	.05 Tubular	500V
12	.05 Tubular	500V
13	.02 Tubular	750V
14	300pF	Mica
15	22pF	Silver Mica
16	.25 Electrolytic	25V
17	1500pF	Mica
18	500pF	Mica
19	200pF	Mica
20	.02 Tubular	750V
21	4 Electrolytic	350V
22	20 Electrolytic	350V
23	.05 Tubular	1000V
24	.002 Tubular	1000V
25	16 Electrolytic	450V

### INDUCTORS

L	Ohms
1	very low
2	very low
3	2
4	18
5	very low
6	very low
7	3
8	6.5
9	6.5
10	6.5
11	4
12	4
13	600 Total Tapped 20
14	very low
15	2.75
16	very low
17	300 Total
18	very low
19	32 Total



## REVO COOKERS—Continued

(when fitted) share the same fuse. Oven pilot light is wired across low resistance coil (Fig. 7) in neutral side of oven heater circuit. Earthing pins of plates, etc., are wired on a continuous earth bonding. Mains wiring within cooker is carried out with heavy gauge cambric and asbestos insulated wire. Paxolin anchoring strips are used to support wiring runs. A theoretical circuit diagram is shown in Fig. 8.

### MAINTENANCE

**Removal of plates and grill.**—Lift off splash-plate and undo hob securing nut, situated on underside of hob, and accessible through open hot-cupboard door. Raise up hob and place stay in position. Lift boiling plates and grill boiler out—keeping them level, so as not to strain plug pins.

**Renewal of fuses.** Raise hob as above and undo two milled nuts on top of fuse box cover. Lift off cover plate to expose fuses (Fig. 3). From front to back the fuses are positioned as follows: oven, 8-in. plate, 64-in. plate and warming drawer (when fitted), grill-boiler.

**Removal of oven elements.**—Withdraw oven interior by sliding it forward out of oven (Fig. 4). Each element is connected to busbars around oven by two metal straps. Undo nuts securing straps to busbars and remove complete element. Renew spirals if necessary and replace elements. Care should be taken to see that oven side elements are held securely at the front by the studs on oven walls.

**Renewal of oven pilot lamp.**—Unscrew the red cap in centre of Revostat oven control knob and renew bulb (3.5V).

**Removal of heated drawer element.**—Open the

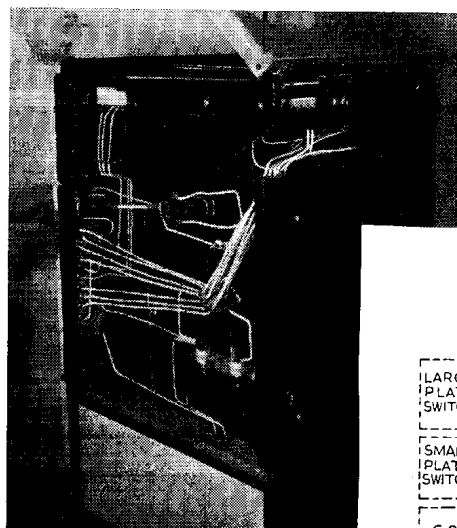


Fig. 7.—With right-hand side panel and top rear panel removed all wiring is exposed to view. Thermostat can be withdrawn from oven after coupling rod screws and grub screw under head are loosened

Fig. 8.—Wiring diagram of 464/D cooker fitted with heated drawer

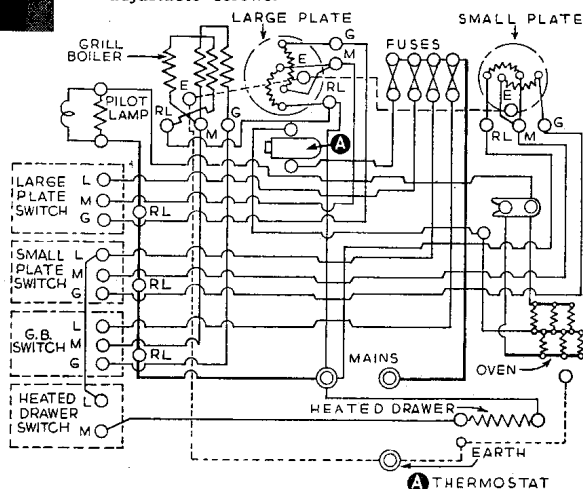
drawer to nearly its full extent and lift up pivoted stop catches at each side. Slide drawer completely out of runners. Undo two nuts on top of heater baffle plate and lift off plate. Remove wires to element and loosen lower nut on right hand side baffle plate screw sufficient to allow heater clamping bracket to be raised clear of element, and also slacken clamping nut on left-hand baffle plate screw. Remove element and renew spiral, etc., as necessary. When replacing drawer, pull out runners as far as they will go, place drawer flange on top of first roller on runners and slide in drawer. Check to see that stop catches have dropped into position and are operating satisfactorily.

**Access to wiring.**—Remove the two screws on rear flange of right-hand side panel of cooker and carefully lift off panel. Remove the two screws of top section of rear panels and take off this top panel. All wiring is accessible on removal of these two panels (Fig. 7). The other side and rear panels should not be removed unless absolutely necessary, as oven lagging will be exposed.

**Removal of thermostat.**—Remove side panel as above. Loosen the two clamping screws in coupling rod between Revostat control knob and thermostat and withdraw couplers from slots (Fig. 7). Remove wires to thermostat. Loosen thermostat clamping screw located in collar on brass mounting bracket on side of oven outer panel. Withdraw thermostat and tube from side of oven. Thermostat fitted is a Satchwell type C5. When recoupling thermostat to control knob, check to see control knob calibration of 300 deg. agrees with setting on thermostat.

**Height adjustment.**—The hob height is adjustable over approximately 1 in. for alignment with other kitchen equipment. Remove splash-plate and lift up hob. Remove top rear panel to give access to bottom nut of hinge pins. Loosen this nut and adjust height of hob by means of top nut on hinge pins. When height is correct, tighten bottom nut and replace back panel. After adjustment of hinges it is necessary to level up hob at front edge by means of the two screws on front frame. Levelling screws are fitted to base of cooker.

**Hotplate and grill** have to be approximately 1/16 in. above hob level. Each plate is positioned on adjustable screws.



## GEC Model BC 5050

Contd. from page 14

**AERIAL** on SW band aerial signal is inductively coupled by L1 to SW grid coil L2. On MW and LW bands the signal is fed through L1 and bottom end coupled by C1 to the grid tuned coils L3, L4. The grid coils L2, (SW), L3 (MW), L4 (LW) which are series connected and trimmed by T1, T2, T3 respectively, are tuned by VC1 and coupled by C3 to g1 of triode-hexode frequency changer V1. S1 connects bottom end of L2 down to chassis when receiver is switched to SW band, and S2 shorts out L4 on SW and MW bands.

Cathode of V1 is at chassis potential and a standing bias together with AVC voltage are fed by R4 to g1 of V1. R14, C12 give AVC line decoupling. Screen (g2, g4) voltage is obtained from potential divider R2, R3 and decoupled by C2. Primary L9, T7 of IFT1 is in the hexode anode circuit.

**Oscillator** is connected in a grid tuned shunt-fed circuit. The series connected grid coils L5 (SW), L7, (MW) L8 (LW) which are trimmed by T4 (SW), T5 (MW) T6, C6 (LW) and padded by C7, C8, C9 are tuned by VC2 and coupled by C5 to oscillator grid (g1, g3) of V1. S3 in its SW position shorts out the MW and LW tuned circuits and leaves C9 in circuit as SW padder. S4 in SW and MW position shorts out L8, C7 and in its LW position, when S3 is open, effectively connects ballast trimmer capacitor C6 across C8 to increase padder capacity. Self bias for oscillator grid is developed on C5 with R5 as leak resistor.

On SW range anode reaction voltages are obtained inductively from series-fed coil L6 and in addition C10 gives capacitive coupling. On MW and LW ranges capacitive reaction voltages, developed on C6, C8 (MW) and C8, C9 (LW) are fed by C10 through L6 to oscillator anode. R7 is anode load and R6 series limiter.

**IF amplifier** operates at 456 kc/s. Secondary L10, T8, of IFT1 feeds signal, a standing bias and AVC voltages which are decoupled by R14, C12 to g1 of IF amplifier V2. Screen (g2) voltage is obtained from R9 and decoupled by C11. Primary L11, T9 of IFT2 is in the anode circuit.

**Signal rectifier.**—Secondary L12, T10 of IFT2 feeds signal to one of diodes of V3. R11 is diode load and R10, C14 form an IF filter.

**AVC.** C15 feeds signal at anode V2 to second diode V3. Load R15 is connected to negative HT bias resistor R25 to provide standing bias for V1 and V2, and delay voltage for AVC diode. R14, C12 give decoupling to AVC line.

**AF amplifier.**—C13 feeds rectified signal to volume control R12 and thence to grid of triode section of V3. Cathode bias is provided by R13 decoupled by C16. R16 is anode load and C18 anode RF bypass capacitor.

**Output stage.**—C20 feeds signal from anode V3 through top lift circuit R18, C19, and stopper resistor R21, to g1 of pentode output valve V4. R20 is grid resistor and R19, C17, form a bass lift circuit. S5 shorts out the top lift network when wavechange switch is in SW position.

Cathode bias is provided by R24. As no decoupling capacitor is fitted across R24 a certain

amount of negative feedback is applied to the grid input of V4. Screen (g2) voltage is obtained from R23 decoupled by C22. R17 is screen stopper resistor.

Primary L13 of output matching transformer OP1 is in the anode circuit. Secondary L14 feeds signal to a 64 in. PM loudspeaker L15. Sockets are fitted on L14 for connection of a low impedance type extension speaker.

**HT** is provided by a directly-heated full-wave rectifier V5. HT secondary L17 of mains input transformer MT1 provides its anode voltages and L16 its filament current. Resistance capacity smoothing is given by R23, C22, C25, and tapped primary L13 of OP1 provides hum cancellation in output stage.

Further decoupling is given by voltage dropping network R8, C21 and RF filter capacitor C4.

**Heaters of V1 to V4** and dial lights obtain their current from L18. Primary L19 of MT1 is tapped for input voltages of 190-215, 215-240, 240-260V, 40-60 c/s. S6 which is ganged to tone control spindle is the ON/OFF switch.

**Chassis removal.**—Remove the four control knobs and back panel. Remove the two wood screws securing dial reflector screen to rail along inside of top of cabinet. Remove the four chassis bolts and withdraw chassis to extent of LS leads. Unscrew the four bolts holding LS to baffle at front and remove the speaker from cabinet.

### TRIMMING INSTRUCTIONS

Apply signal as stated below	Tune receiver to	Trim in order stated for max. output
(1) 456 kc/s to g1 of V2 via .01 mF	2000 metres	T10, T9
(2) 456 kc/s to g1 of V1	—	T8, T7
(3) 6 mc/s to AE sockets via dummy aerial	Scale Ref. 86	Core L5, L2
(4) 18 mc/s as above	6.5	T4, T1. Repeat (3) and (4)
(5) 600 kc/s as above	73.5	Core L7, L3
(6) 1.4 mc/s as above	9	T5, T2. Repeat (5) and (6)
(7) 160 kc/s as above	72.5	Core L8, L4
(8) 300 kc/s as above	11	T6, T3. Repeat (7) and (8)

NOTE.—Scale Ref. is located on chassis just below reflector

### Disposing of Fluorescent Tubes

Engineers should know the correct method to dispose of old fluorescent tubular lamps and sales staffs should give advice on the subject to members of the public ordering replacement lamps.

Inhalation or absorption of the beryllium compound which lines the inside of these tubes is dangerous.

Each lamp should be broken at the cap to destroy the vacuum and the lamp should then be broken up completely while immersed in a tub of water. The fragments should then be buried in waste ground.