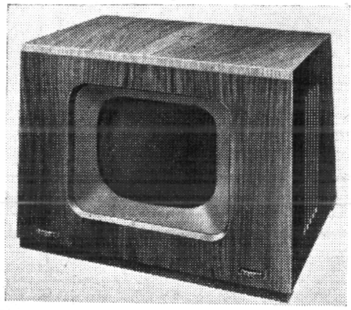
PYE
LV30, LV30C, BV30, BV30C, LV51, BV51



Fourteen-valve, plus CRT, television receivers made in London (LV) and Birmingham (BV) models. The 30 table types and 30C consoles have a 9-in. tube giving an 8 by 6-in. picture. The 51 table models have a 12-in. tube for a 10 by 8-in. picture. F added to the type number indicates a fringe area model with pre-amplifier. The receivers are "black screen" models having a neutral filter implosion screen and are suitable for 200-250V AC 50c/s or DC. Made by Pye, Ltd., Cambridge.

THE chassis is designed to operate on the lower sideband of vision carrier and uses TRF circuits with permeability tuned inductances, the first two RF amplifiers being common to both sound and vision channels. Vision and sound interference suppression circuits are fitted, and EHT is obtained from line fly-back pulses. Mains consumption is approximately 125W.

Aerial input is designed for an 80-ohm balanced twin feeder. A tapped attenuator formed by R1 to R5 is incorporated in the aerial input circuit for use in areas of high or medium signal strength. Signal is fed through balanced input circuit L1, C1, L2, C2 and coupled by C4 to L3 in the grid of first RF amplifier V1. C3, C4 are isolating capacitors between aerial and receiver chassis with R6, R7 providing DC continuity.

Vision channel consists of three RF amplifiers V1 to V3, signal rectifier V4A, interference limiter V4B and video output valve V5.

V1 is bandpass coupled by L4, L5 to second RF amplifier V2, which in turn is coupled by a four-element high-selectivity bandpass filter L7, L8, C12, L9, L10, C13, L11 to final RF amplifier V3. L12, L13, C18, L14, L15, C21, L16, which form a second four-element high-selectivity bandpass filter, couple V3 to vision signal rectifier V4A.

Aerial coil L3 and secondary L5 of bandpass coupling transformer between V1 and V2 are damped by R8 and R16 to provide a wide bandwidth to cover both vision and sound frequencies.

Sound signal is tapped from sound rejector circuit L6, C11 in anode of V2. L11 in grid of V3 is damped by R19 to provide a wide vision channel bandwidth. Overall bandwidth of vision channel is 3mc/s.

Gain is controlled by adjustment of cathode bias of V1, V2 by R13 the **Contrast** control. Negative feedback is applied to cathodes of V1, V2 by R11, R15 respectively, to preserve shape of response curve at all settings of R13.

Rectified video signal developed across R23, C24 is DC coupled through peaking coil L21 to grid of video output amplifier V5, the output of which is DC-AC coupled by network R29, R31, C28 to cathode of CRT. L22 is anode peaking coil, and L23 an RF choke. Cathode bias of V5 is stabilised by connecting cathode load R30 in series with R34 to the HT line.

Interference limiter. V4B, which is shunted across signal rectifier load L18, L19, R23, is biased from potential divider R24, R25, so that it will conduct on any pulse greater than peak white amplitude.

Sound channel. The sound signal which is amplified together with vision by V1, V2, is tapped from L6 in the anode circuit of V2 and fed by C37 to L30 in grid of sound RF amplifier V6 where it is amplified and coupled by single-peak transformer L31, L32 to signal rectifier V7A. The gain of V6 is varied by adjustment of its cathode bias by R61 the **Volume Control.**

The rectified signal is developed on R62 and fed by C46 through series noise limiter V7B and coupled by C49 to grid of triode AF amplifier section of V8. Amplified audio signal is then passed by C53 to output pentode section of V8, the output of which is transformer coupled by OP1 to a 6½-in. television type PM speaker L36. Fixed tone control is given by R73, C54.

Negative feedback from secondary L35 of OP1 is fed by C52, R69, R68 to triode section of V8.

Noise suppressor. The rectified audio signal developed across R62 is fed through RF filter L33, C45 to diode anode V7B. Anode V7B is biased positively from HT through R63, hence the diode conducts and produces a cathode voltage across R64. The time constant of R64, C47 is such that the cathode voltage of V7B will follow that of the audio signal passed by C46 to its anode. When a large amplitude high frequency interference pulse appears with the audio signal, then V7B anode is driven heavily negative, but, due to the comparatively long time constant of R64, C47, its cathode potential will be maintained, and thus the valve is cut off during the period of the interference pulse. During the interval whilst V7B is cut off the voltage on C47 falls slightly, giving a high frequency sawtooth waveform which is filtered out by R65, C48.

Sync separator. The video signal at anode of V5 is fed by R35, C29 to sync separator V9. The positive sync pulses drive V9 into grid current and produce across R36 a steady negative bias sufficient to place the negative going picture signal beyond cut-off. Thus only the positive sync pulses cause V9 to conduct to produce amplified negative going pulses in the anode circuit. Anode and screen voltages of V9 are kept low to give a short grid base to ensure sync separation on weak signals.

Line sync pulses are fed by C30 to grid of line scan oscillator V12. Frame sync pulses are fed through interlace filter V10 to anode of frame scan oscillator V11.

Interlace filter is to ensure that only frame sync pulses are fed to V11. Between line sync pulses V9 is cut off and anode V9, V10A rise to HT line potential. V10A therefore conducts and C72 charges up through R39, R40 to HT voltage. During line sync pulses V9 conducts, and thus anode V10A is driven negative to its cathode and the valve is cut off. The time constant of R42, C72 is long compared with line pulses, so the resultant pulse generated across R42 by discharge of C72 whilst V10A is cut off is heavily attenuated.

During the longer frame pulses V10A is cut off for a much longer period and C72 is able to discharge through R42 to a much lower potential, and thus produces a large negative going pulse. Because anode voltage of V10B is lower than that of V10A and their cathodes are strapped, then V10B only conducts on the larger frame sync pulses. The resultant pulse developed across R41 is fed by C31 to anode of frame scan oscillator (triode section) V11.

Frame scan oscillator and amplifier. Oscillator is triode section of V11 operated as a grid-blocking oscillator with anode-to-grid back coupling by transformer FT1. Scan waveform is generated in the grid circuit on C33 and is fed by C35 through **Frame Amplitude** control R52 to grid of output pentode section of V11. Frequency of oscillation is adjusted by varying the charging voltage by means of R46 the **Frame Hold** control.

Linearity is adjusted by R50 which forms part of the circuit C34, R50, R51 to compensate for losses in output transformer FT2. The amplified waveform is transformer coupled by FT2 to frame scanning coils L28, L29 on neck of CRT.

R54 is damping to prevent ringing, and R55 reduces inter-modulation between frame and line coils.

Line Scan waveform is obtained from a self-oscillating output valve V12 used in conjunction with an efficiency diode V14A. Start of the scan waveform (approximately 30 per cent.) is provided by the efficiency diode, and the remainder by V12.

Oscillation of V12 is brought about by transformer coupling by LT1 between screen and control grids. Frequency, or **Line Hold,** is controlled by variation of effective inductance of LT1 by means of shunt permeability tuned inductor L37.

Output waveform developed across anode section of primary L41 of line output transformer LT2 is fed by secondary L42 through L44, C60 to line deflector coils L46, L47 on neck of CRT.

Line amplitude is adjusted by varying the series inductance L44. C60 isolates the DC current, which is passed through L42 from the deflector coils.

During the period of line flyback, which occurs while V12 is cut off due to large negative voltage swing developed on secondary L40 of LT1, the surge current in secondary L42 of LT2 causes V14A to conduct and sets up an additional charge on C58, C59. The charge leaks away through L44, L42 and provides the commencement of the line scan. Linearity of commencement of line scan is controlled by adjustment of L45.

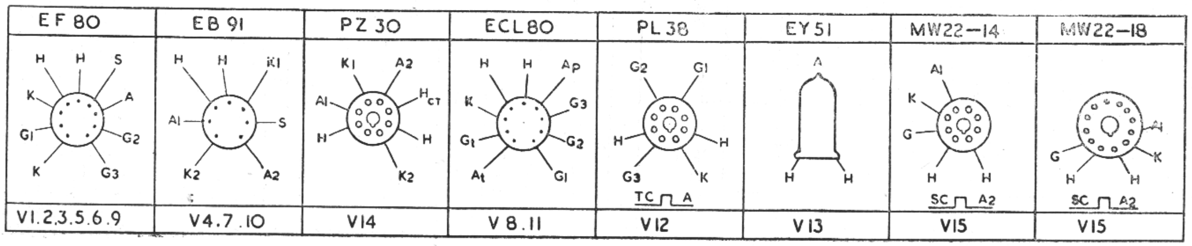
The 50V on C58, C59 is in series with the HT supply to V12, and part of V11, and the increased voltage is also used to feed screen of CRT.

EHT of 6.5 to 7kV in the 30 models, or 7.25-7.75kV in the 51 models, which have a different line

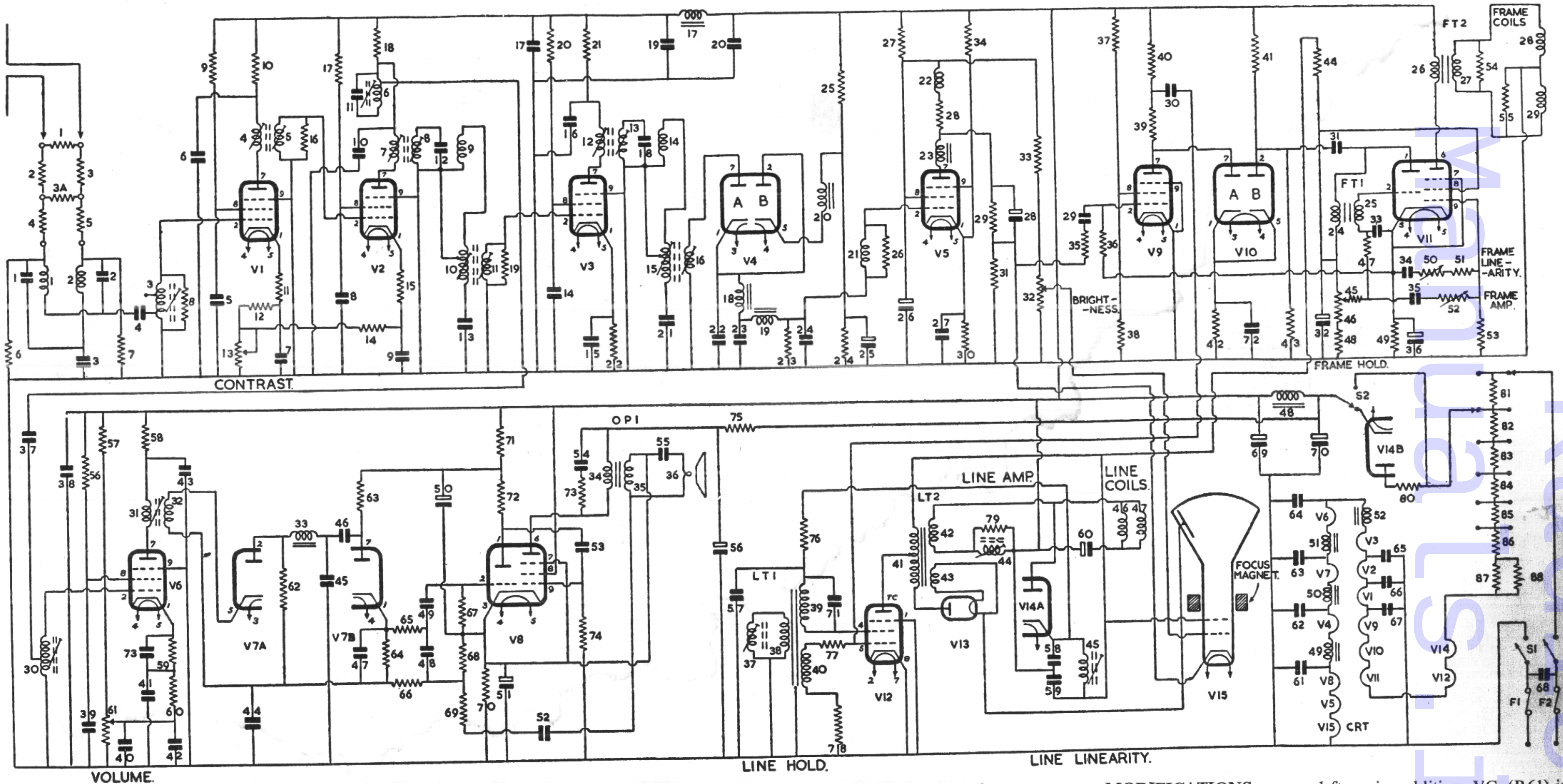
Text continued p. 34: diagrams, see pp. 32-33.

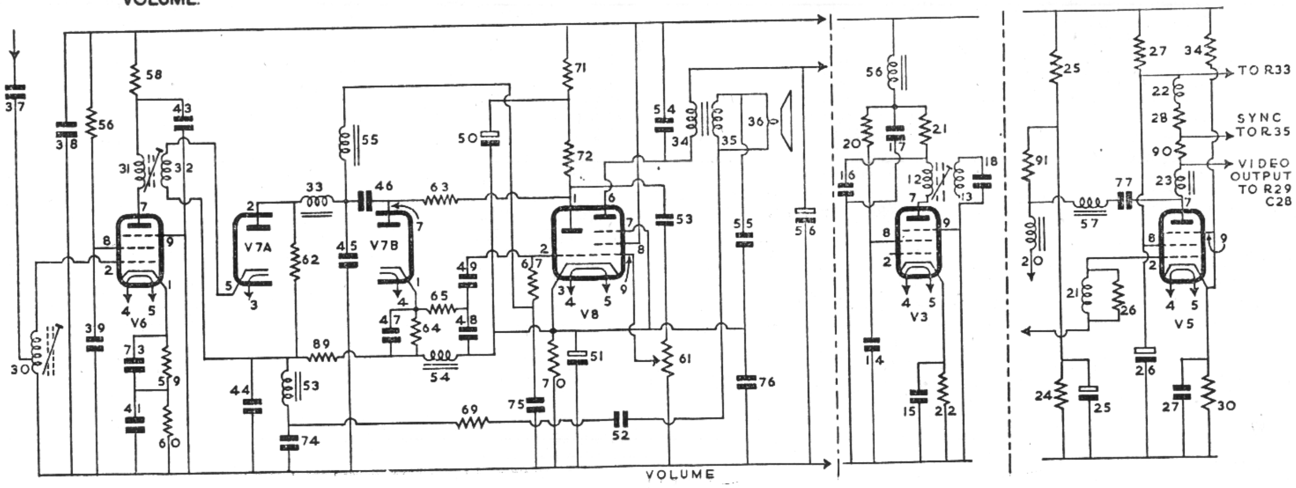
VALVE READINGS

V	Type	A	G_2	K	Remarks
1	EF80	150V	190V	2.2V	R13 at Max.
2	EF80	150V	190V	2.2V	R13 at Max.
3	EF80	195V	195V	2.7V	R13 at min.
4A, 4B	EB91	—	—	—	
5	EF80	117V	148V	3V	R13 at min.
6	EF80	192V	192V	3V	R13 at min. R61 at max.
7A, 7B	EB91	—	—	—	
8	ECL80	Ap 180V At 65V	195V	6V	
9	EF80	85V	37V	—	
10A	EB91	100V		100V	
10B	EB91	85V		100V	
11	ECL80	Ap 180V At 230V	230V	12V	Gt = 20V
12	PL38	—	210V	—	
13	EY51	—	—	6.5kV	
14A	PZ30	—	—	247V	
14B	PZ30	210V RMS	—	210V	HT current = 180mA
15	MW 22-14	6.5kV	247V	60V	Grid O + 70V



In the LV51, BV51 the 12in. cathode-ray tube is MW31-18, base connections being as for MW22-18.





MODIFICATIONS

The large circuit and the layout diagrams were prepared from a BV30 received in our laboratory. Modifications that will be found in later models are indicated on the left.

Additional components are: R89 10k, R90 2.7k, R91 100k, R92 39, all ¼W except for ½W R90; C74 1,000pF tubular, C75 22pF silver mica, C76 1,000pF tubular, C77 .1mF 500V tubular.

L53-57 inclusive are extra windings of very low resistance.

Components differing in value from figures shown in the Tables are: R24 (F models only) 68k ¼W, R28 2.7k 1W, R61 500k pot. with DPST switch; R63 2.2M ¼W; C47 .01mF 500V, and C54 .001mF 300V AC tubulars.

Changes to improve sound noise suppression are shown on left; in addition VC (R61) is transferred to V8 grid circuit.

In the video channel, the output valve has tapped load R28, R90 to attenuate sync. signal. Limiter R80 is transferred from V14B anode to series position with C70. RF decoupling of HT to V3 is given by L56; R92 is in series with common feed from Contrast control to V1, V2 cathodes.

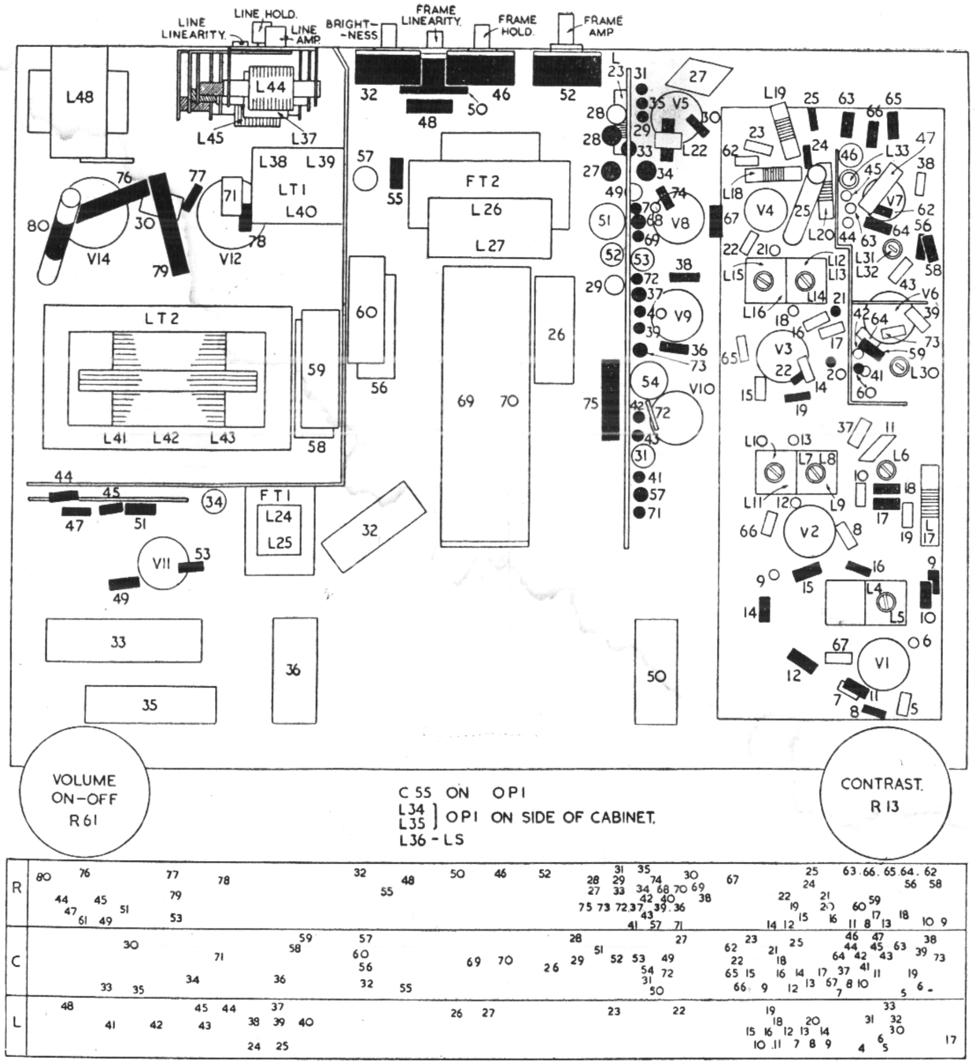
Fringe models have modified vision limiter circuit, C25 being deleted and R91, L57 and C77 added.

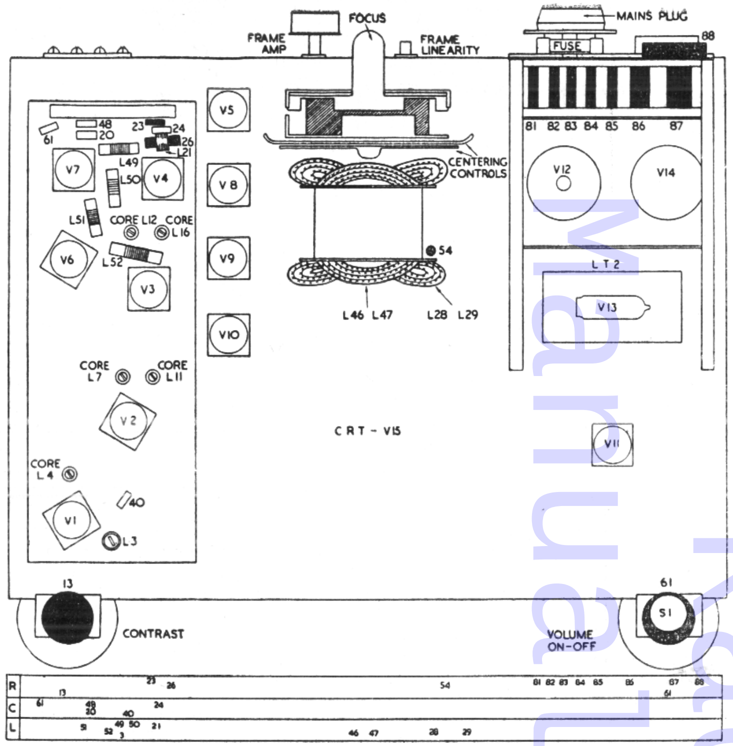
MODELS LV51, BV51. Different line output transformer gives increased EHT. A 100pF 1,000V DC working condenser is in parallel with deflection coils.

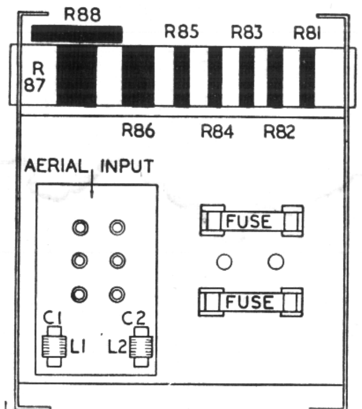
MODELS LV30C, BV30C. C52, C55 are shorted to increase 'top.'

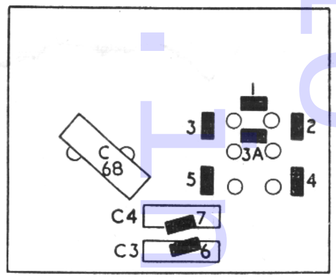
CAPACITORS

C	Capacity	Type
1	... 47pF	Ceramic
2	... 47pF	Ceramic
3	... .001	Tubular 300V AC
4	... .001	Tubular 300V AC
5	... 1000pF	Tubular
6	... 1000pF	Tubular
7	... 1000pF	Tubular
8	... 1000pF	Tubular
9	... 1000pF	Tubular
10	... 1000pF	Tubular
11	... 50pF	Silver Mica
12	... 10pF	Ceramic
13	... 10pF	Ceramic
14	... 1000pF	Tubular
15	... 1000pF	Tubular
16	... 1000pF	Tubular
17	... 1000pF	Tubular
18	... 10pF	Ceramic
19	... 1000pF	Tubular
20	... 1000pF	Tubular
21	... 10pF	Ceramic
22	... 5pF	Ceramic
23	... 5pF	Ceramic
24	... 5pF	Ceramic
25	... 20	Electrolytic 12V
26	... 12	Electrolytic 275V
27	... 1000pF	Silver Mica
28	... 2	Electrolytic 150V
29	... .05	Tubular 350V
30	... 20pF	Silver Mica
31	... .01	Tubular 500V
32	... 12	Electrolytic 275V
33	... .25	Tubular 350V
34	... .05	Tubular 350V
35	5	Tubular 350V
36	... 50	Electrolytic 25V
37	... 5pF	Ceramic
38	... 1000pF	Tubular
39	... 1000pF	Tubular
40	... 1000pF	Tubular
41	... 1000pF	Tubular
42	... 1000pF	Tubular
43	... 1000pF	Tubular
44	... 1000pF	Tubular
45	... 5pF	Ceramic
46	... .05	Tubular 350V
47	... .02	Tubular 500V
48	... 1000pF	Tubular
49	... .01	Tubular 500V
50	... 8	Electrolytic 250V
51	... 25	Electrolytic 12V
52	... .02	Tubular 350V
53	... .01	Tubular 500V
54	... .025	Tub. 600V AC
55	... .02	Tubular 500V
56	... 12	Electrolytic 275V
57	1	Tubular 350V
58	5	Tubular 350V
59	5	Tubular 350V
60	... 25	Electrolytic 25V
61	... 1000pF	Tubular
62	... 1000pF	Tubular
63	... 1000pF	Tubular
64	... 1000pF	Tubular
65	... 1000pF	Tubular
66	... 1000pF	Tubular
67	... 1000pF	Tubular
68	... .01	Tubular 300V AC
69	... 100	Electrolytic 280V
70	... 60	Electrolytic 280V
71	... 20pF	Silver Mica
72	... 220pF	Silver Mica
73	... 5pF	Ceramic









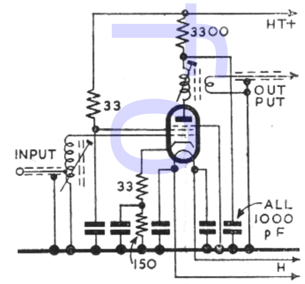
RESISTORS

R	Ohms	Watts
1	... 120	¼
2	... 220	¼
3	... 220	¼
3A	... 120	¼
4	... 150	¼
5	... 150	¼
6	... 2.7M	¼
7	... 2.7M	¼
8	... 5.6K HS	⅛
9	... 33	¼
10	... 3.3K	¼
11	... 33	¼
12	... 120	¼
13	... 3K Potr.	
14	... 120	¼
15	... 47	¼
16	... 5.6K HS	⅛
17	... 33	¼
18	... 3.3K	¼
19	... 5.6K HS	⅛
20	... 33	¼
21	... 33	¼
22	... 220	¼
23	... 4.7K HS	⅛
24	... 27K HS	⅛
25	... 560K HS	⅛
26	... 10K	½
27	... 5.6K	1
28	... 5.6K	1
29	... 33K	¼
30	... 330	¼
31	... 33K	¼
32	... 25K WW Potr	
33	... 33K	½
34	... 33K	1
35	... 10K	¼
36	... 2.2M	¼
37	... 47K	½
38	... 15K	¼
39	... 22K	¼
40	... 6.8K	¼
41	... 47K	¼
42	... 220K	¼
43	... 82K	¼
44	... 2.7K	¼
45	... 470K HS	⅛
46	... 25K WW Potr.	
47	... 82K HS	⅛
48	... 47K	½
49	... 1K	¼
50	... 150K Potr.	
51	... 47K	¼
52	... 500K Potr.	
53	... 2.2M	¼
54	... 180	¼
55	... 4.7K	¼
56	... 33	¼
57	... 82K	½
58	... 33	¼
59	... 47	¼
60	... 180	¼
61	... 3K Potr. with DPST switch	
62	... 33K	¼
63	... 560K	¼
64	... 1M	¼
65	... 33K	¼
66	... 1K	¼
67	... 2.7M	¼
68	... 10K	¼
69	... 33K	¼
70	... 270	¼
71	... 4.7K	¼
72	... 33K	¼
73	... 33K	¼
74	... 1.2M	¼
75	... 1K	1
76	... 1.5K	1
77	... 39K	¼
78	... 10K	¼
79	... 2.2K	1
80	... 39 WW 6W	
81	... 33	
82	... 33	
83	... 33	
84	... 33	
85	... 33	
86	... 98	
87	... 365	
88	... Thermistor	

HS—High Stability 5%

INDUCTORS

L	Ohms
1—17	... very low
18 ...	4
19 ...	4
20 ...	5
21 ...	... 4.5
22 ...	... 6.5
23 ...	5
24 ...	... 550
25 ...	... 150
26 ...	... 1450
27 ...	... 3
28, 29	9.5 together
30—32	... very low
33 ...	4
34 ...	... 720
35 ...	... .35
36 ...	... 3
37 ...	... 17.5
38 ...	... 7
39 ...	... 53
40 ...	... 60
41 ...	500 total
42 ...	... 7.5
43 ...	... very low
44 ...	... 8
45 ...	... 7
46, 47	20 together
48 ...	... 75
49—52	... very low



Pre-amplifier circuit

PYE LV30, BV30, LV51, BV51—*Continued*

scan output transformer, is obtained by rectifying by V13 the surge voltage set up across overwound primary L41 of LT2 when V12 is cut off. EHT is fed to final anode of CRT, the capacity between inner and outer coatings of which forms the smoothing capacitor.

HT is provided on AC supplies by a half-wave indirectly-heated rectifier V14B. Its anode voltage is obtained from the input mains direct or through tapped dropper R81 to R86. On DC supplies provision is made to short circuit the rectifier and its limiter R80 to avoid unnecessary voltage dropping. Choke-capacity smoothing is given by L48, C69, C70. HT for anode of sound output valve V8 is taken from reservoir smoothing capacitor C70 and resistance capacity smoothed by R75, C56. Sound channel HT line is RF decoupled by C38 and vision RF stages V1, V2, V3 by L17, C19, C20. Reservoir smoothing capacitor C70 should be rated to handle 400mA ripple current.

Heaters of V1 to V15, with the exception of V13, are wired in series and obtain their current from the mains through tapped dropper R81 to R86 and thermal surge limiter R88 shunted by R87. L49 to L52 are heater RF chokes, and C61 to C67 heater by-pass capacitors. Heater of V13, the EHT rectifier is supplied from an auxiliary winding L43 on line output transformer LT2.

S1 ganged to spindle of volume control R61 is the ON-OFF switch. Mains input is fitted with a filter capacitor C68 and has a 750mA fuse in each lead.

CRT is a 9-in. or 12-in. tetrode with permanent magnet ring focusing. Variation of grid voltage by R32 gives control of picture **Brightness.**

Picture centering control consists of two rotating magnetic plates positioned between focus magnet and deflector coil assembly.

ALIGNMENT INSTRUCTIONS

LONDON

Connect a diode voltmeter between cathode of CRT and chassis. (A suitable meter can be constructed from the circuit shown.) Connect a 2.5 ohm output meter in parallel with LS speech coil.

Remove large screening can from the RF section of chassis. Set Contrast R13 to maximum and Volume R61 to minimum. Connect a 10pF damping capacitor between anode V3 and chassis. Switch diode voltmeter to 2.5V range.

Inject 43.9mc/s (61mc/s in the case of Midlands models) to V2 and adjust L13 for max. output. Change damping capacitor to between anode V4 and chassis. Adjust L15 for max. Change damper to between junction of C21, L15 and chassis and adjust L16 for max.

Connect damper across L13 and adjust L12 for max. Replace RF section screening can.

Inject 43.9mc/s (60.6 Midlands) to V1 and adjust L8 for max. Connect damping capacitor between gl of V3 and chassis. Adjust L10 for max. Change damper to between junction C13, L10 and chassis. Adjust L11. Connect damper across L8 and adjust L7.

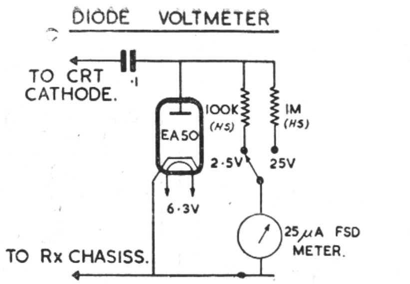
Connect damper between anode V1 and chassis, inject 43.4mc/s (60.1mc/s) and adjust L5. Connect damper between gl and V2 and chassis and adjust L4.

Switch diode voltmeter to 25V range and R13 to approx. mid. position. Inject 43.9mc/s (60.6mc/s) to "intermediate" aerial sockets and adjust L3 for max.

Inject 41.5mc/s (58.25mc/s), switch DV to 2.5 V range and adjust L6 for *minimum.*

Set R61 to max. position and adjust L30 and L31, L32 for maximum deflection on audio output meter.

Vision Bandwidth. With R13 at maximum, set sig. gen. to 45mc/s (61.75mc/s) and approximately 65 microvolts (175 microV for Midlands). Vary the input from 45 to 42.3 mc/s (61.75-59.25mc/s); the attenuator settings to maintain



6.5V on the diode voltmeter should be within 1.3 times attenuator reading at 45mc/s (61.75). At 45.25 (62 mc/s) the attenuator setting should be increased by 1.12 times (*i.e.*, 1dB).

Vision sensitivity at 45mc/s (61.75mc/s) should be better than 65 (175) microvolts for an output of 6.5V on the diode voltmeter.

Sound Sensitivity at 41.5mc/s (58.25mc/s) should be better than 25 (50) microvolts for an output of 20mW on the AF power output meter.

Sound rejection. With R13 at mid-position and R61 at minimum, set the signal generator to 41.5mc/s (58.25mc/s). Attenuator settings to obtain output of 0.5V should not be less than 70 times the setting required to obtain the same output with a 45mc/s (61.75mc/s) signal. It should be noted that a small deviation from this frequency will substantially alter the "sound" rejection figure obtained.

COLOUR TELEVISION

THE Columbia colour television accepted as the basis for a public service in the United States, and now subject of a legal dispute, is known as a field sequential system—that is, the colour changes with each frame. The number of lines is the same as ours—namely, 202.5 per frame, interlaced to provide a 405-line picture.

There are 144 frames per second, the colours being in red, blue and green sequence. It takes, therefore, three times 1/144 sec., or 1/48 sec., to assemble a complete frame scan, and twice as long, 1/24 sec., for a complete interlaced picture.

The number of lines per second is 144 x 202.5, which is 29,160, compared with 15,750 (30 x 525) of the US black and white system.

At the transmitter a colour filter disc with red, blue and green segments rotates in front of the lens of a single conventional pickup camera. If the disc has 12 segments in all, four in each colour, the speed is 720rpm. The field scanning is synchronised with disc rotation and an extra sync. pulse inserted in the signal every third frame.

At the receiver a synchronised disc, usually with six filters and at a speed of 1,440rpm, is placed in front of the CR tube.

The system uses existing black-and-white transmitters unchanged and present co-axial cables. An adapter and colour converter can be fitted to existing black-and-white receivers. An adapter also permits colour transmissions to be viewed in black-and-white on existing sets.

Nevertheless, a large part of the US industry is opposing the FCC acceptance of the Columbia system on the grounds that it is not compatible with the existing black-and-white standards. The FCC has asked firms to state whether they could modify their designs to work on "bracket standards"—*i.e.*, a range of scanning frequencies, namely, 50-150c/s and 15-32kc/s

It appears that most firms are saying the changes would be uneconomic.

JACKSON "GIANT"—*Contd.*

panel. Heater sheath is separately earthed by wire brazed to left-hand gland nut.

Oven heating is controlled by a Diamond H thermostat type 1 or 2/TH32C/69, which gives full range of control from 150 to 550 deg.F. Control knob is fitted with a 3.5V, .3A pilot lamp to indicate when power is switched on by thermostat.

Plate warming compartment is formed by space between lagged side wall of oven and outer side panel of cabinet. Bottom of compartment is formed by a pressed-steel shelf bolted to front frame, oven lagging panel and rear panel just above thermostat and Simmerstat controls. Shelf is provided with a shallow well to retain plates in position. Compartment is enclosed by a pressed steel hinged door fitted with moulded handle and spring catch.

Cooker cabinet is enclosed by pressed steel side, rear and bottom panels. Lefthand side and bottom panels serve to keep oven lagging in position. Oven door and plate warming door are cream and front frame, top cabinet panel and bottom of plate warming compartment are black vitreous enamelled. Side panels are cream and bottom, rear and internal panels are black stove enamelled.

ELECTRICAL SYSTEM

Provision for three-core heavy rubber covered cable is made through an insulating bush in lefthand side panel and connection made to block on interior rear panel. Earth wire of input cable is connected to large earthing terminal just below.

The wiring diagram is shown in Fig. 7.

As the cooker is designed to operate from a 13A or 15A wall socket fuses are not incorporated. Internal wiring is carried out with heavy gauge flame-proof insulated copper wire.

MAINTENANCE

Before commencing maintenance or dismantling, cooker should be unplugged from socket.

Removal of boiling plate. Lift off hob and remove rear panel by undoing two nut-locked screws at top and two screws at bottom. Disconnect element wires from terminal block (Fig. 2), also earth wire and the four heater fixing screws on top panel.

Lift heater and carefully withdraw connecting leads through holes in top panel.

When re-fitting, check that the sealing washers are in position under shrouds on heater tube.

Removal of oven-grill element. Remove hob and rear panel as described and disconnect the two heater leads from terminal block and also undo nut and remove earth wire and bonding strip from screw in centre of ceramic insulating block. Remove final locknut on this screw. Remove ceramic sleeves from element connecting wires and pull heater forward and out of oven (Fig. 3).

Removal of bottom element. Remove hob and rear panel as already described and disconnect the two heater leads from terminal block. Also disconnect earth wire attached to gland nut from earth terminal adjacent. Unscrew and remove the two gland nuts and remove bottom oven plate. Straighten out element connecting wires and withdraw heater forward from oven (Fig. 3).

Removal of thermostat. Remove hob and rear panel and turn cooker on its left side. Remove side panel by undoing two screws at top and bottom edges. Turn cooker upside down and remove bottom panel being careful not to disturb oven lagging which is exposed.

Remove thermostat control knob by undoing

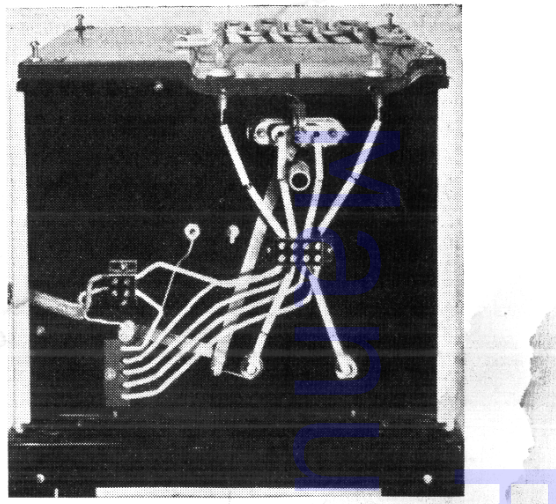


Fig. 6.—The arrangement of wiring and terminal block at rear of cooker

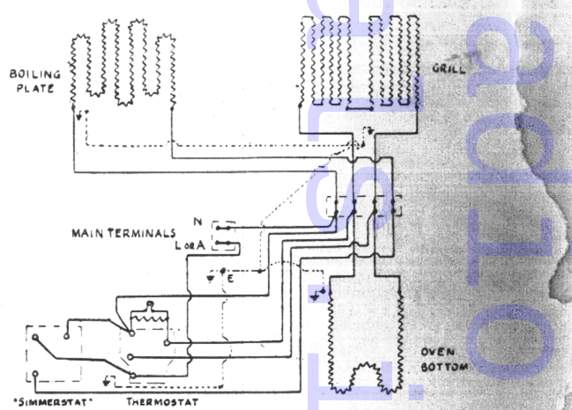


Fig. 7.—Wiring diagram of the Jackson "Giant" table cooker

grub screw and pull off the cover. Unclip pilot lampholder and remove hexagonal fixing nut and cover backplate. Disconnect thermostat.

Uncoil capillary tube and straighten it so that it can pass freely through hole in interior back panel. Draw back thermostat with capillary tube until the latter is completely out of oven. Carefully straighten capillary tube so that it can be pulled forward through clearance hole to allow thermostat to be removed. When refitting see that oven bush is sealed with asbestos packing and that loop of coil in capillary tube is well away from terminals.

Removal of Simmerstat. With hob, rear side and bottom panels removed as described above, pull off Simmerstat knob and disconnect wires from terminals. Undo hexagonal fixing nut and withdraw Simmerstat.

Note: Thermostat and Simmerstat can be removed without taking off bottom panel but with panel removed access is easier.