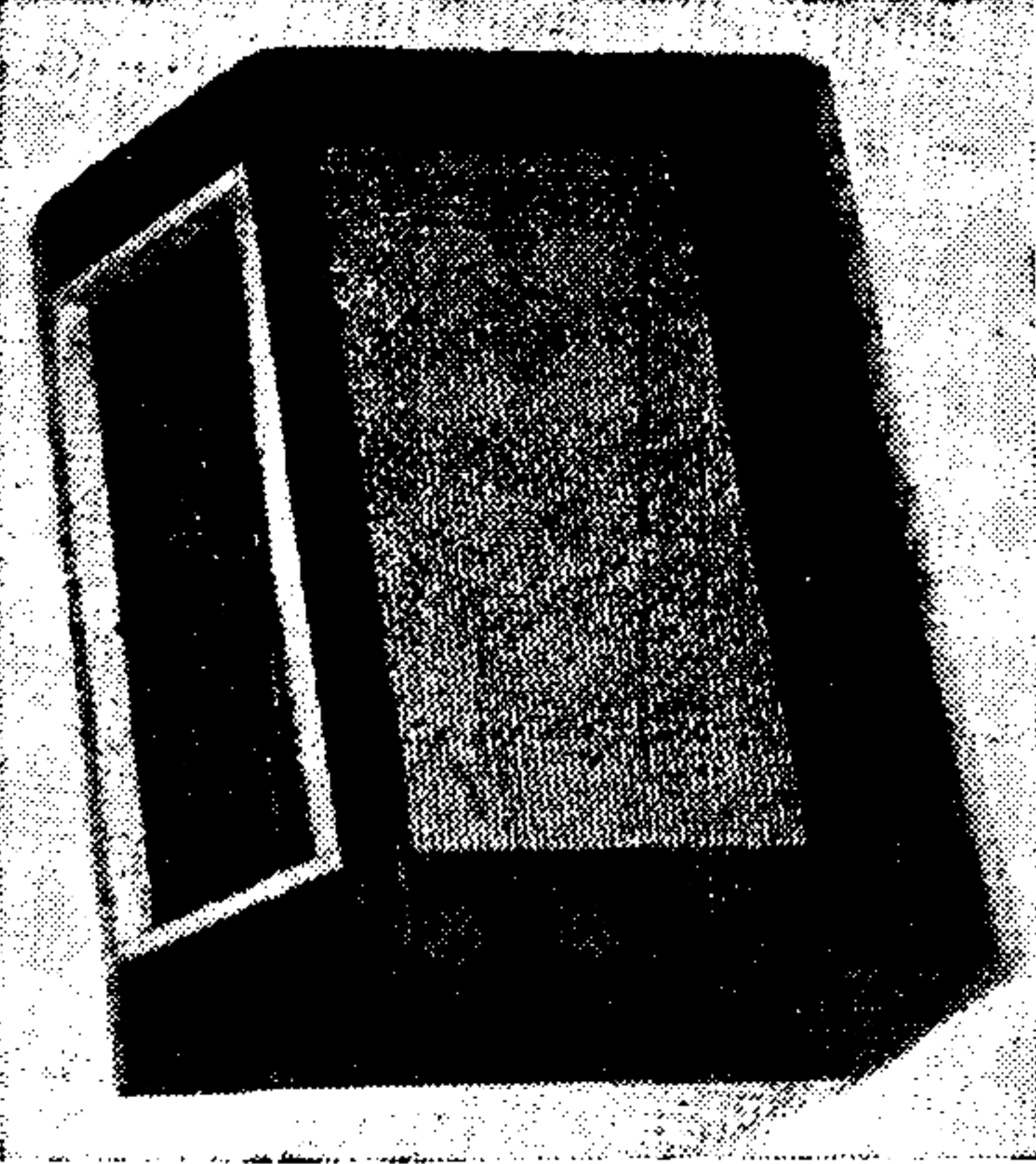


# BEEHOVEN A1188

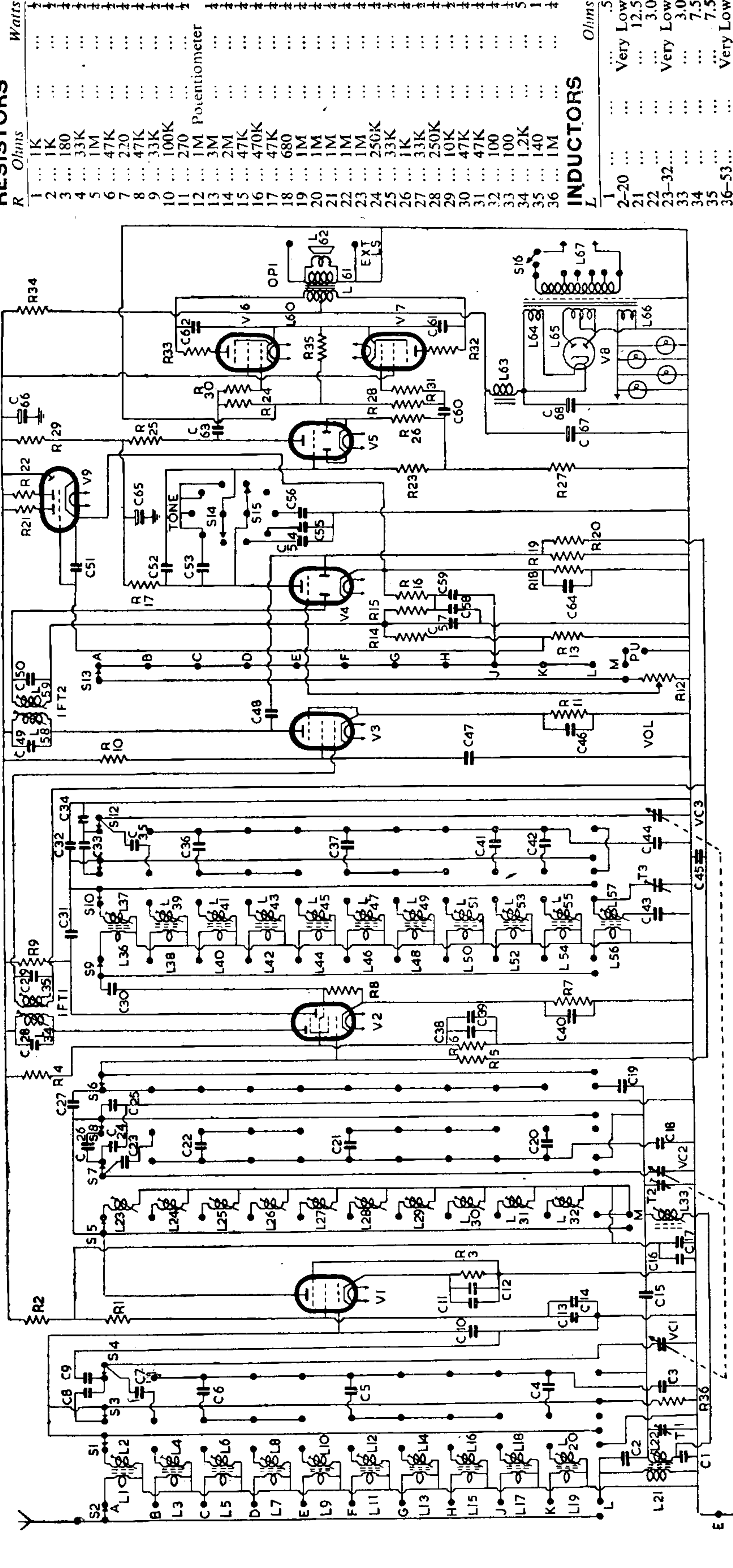
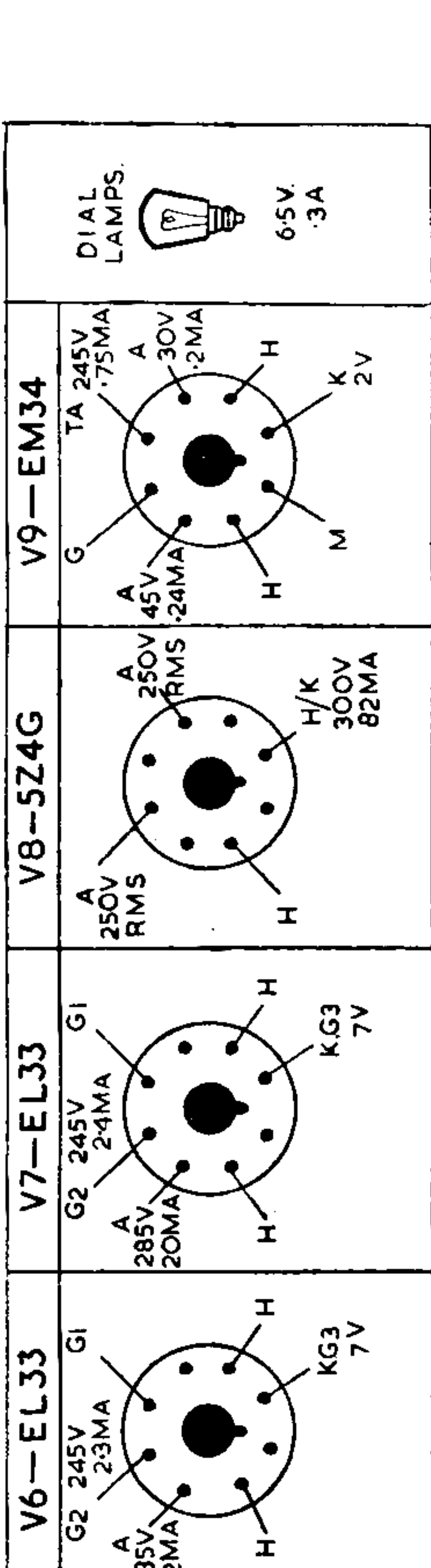
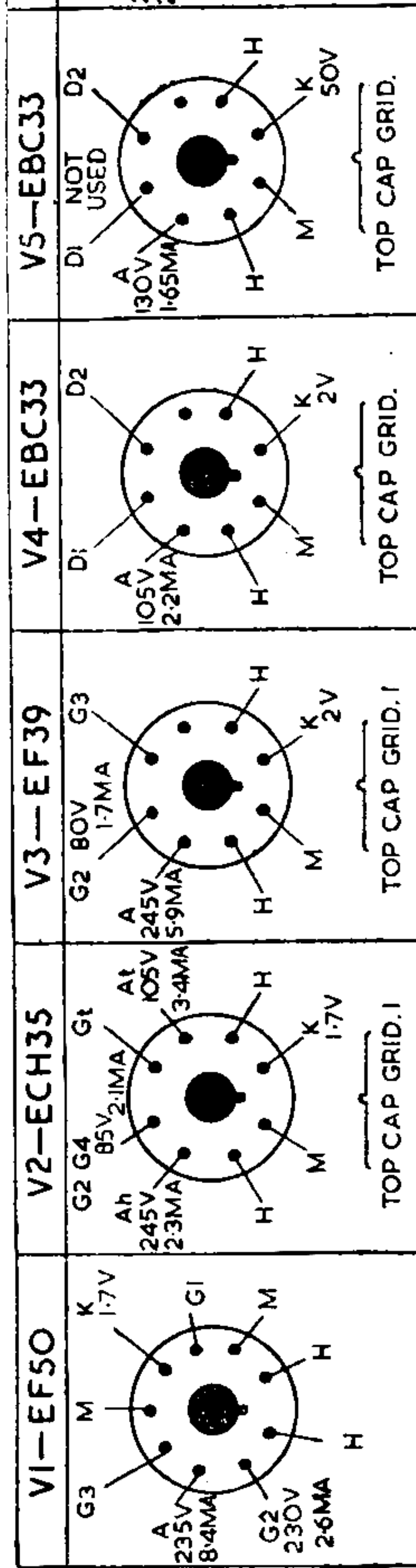
Nine-valve, eleven-waveband superhet with RF stage with Ten SW ranges, all of which are bandspread, and with push-pull output stage. Sockets for crystal or magnetic pickup and low-impedance extension loudspeaker. Figured walnut table-type cabinet. For 100 to 250 V 40-100 c/s AC. Manufactured by Beehoven Electric Equipment, Ltd., Chapel Lane, Sands, High Wycombe, Bucks.



**A**ERIAL is fed to S2 and thence to coupling coils L1, L3, etc. The SW grid coils L2, L4, etc., are switched by S1 to g1 of RF amplifier V1. The MW coil L22 is capacitively coupled by C1, C15 to L33 in a bandpass circuit in the grid of frequency changer V2. S4 switches the tuning capacitor VC1 through series capacitors C4, C5, C6, C7 and C8 to S3, and thence to g1 of V1, except on MW band when it is switched direct to L22. In SW1 position of S4 capacitor C9 is in parallel with VC1. In all except SW1 position C3 is connected in parallel with VC1. C10 is shunted between g1 and earth. R36 is grid resistor. Cathode bias is provided by R3 decoupled by C11 with C12 to give decoupling at the highest frequencies.

HT for V1 anode, decoupled by R2, C16, C17, is fed through tuned coils L23-L32. S5 switches the anode to the coils and S7 switches tuning capacitor VC2, through series capacitor C20, C21, C22, C23, C26 to S8, and thence to the coils. In SW1 position of S7, capacitor C24 is paralleled with VC2. C18 is connected across VC2 except on MW. C25 is coupled between anode V1 and chassis. On MW band, however, VC2 is switched direct to bandpass coil L33.

**Frequency-changer.** On SW bands signal from V1 anode is coupled by C27 to S6 and thence to g1 of frequency-changer V2. On MW band the signal from the aerial band-pass circuit is coupled by C19 to V2. T1, (Continued opposite)



R	Ohms	Watts
1	1K	...
2	1K	...
3	180	...
4	33K	...
5	1M	...
6	47K	...
7	220	...
8	47K	...
9	33K	...
10	100K	...
11	270	...
12	1M Potentiometer	...
13	3M	...
14	2M	...
15	47K	...
16	470K	...
17	47K	...
18	680	...
19	1M	...
20	1M	...
21	1M	...
22	1M	...
23	1M	...
24	250K	...
25	33K	...
26	1K	...
27	33K	...
28	250K	...
29	10K	...
30	47K	...
31	47K	...
32	100	...
33	100	...
34	1.2K	...
35	140	...
36	1M	...

L	Ohms
1	...
2-20	Very Low
21	12.5
22	3.0
23-32	Very Low
33	3.0
34	7.5
35	7.5
36-53	Very Low

C	Capacity	Type
1	0.2 Tubular	350V
2	5pF Twisted Wire	...
3	400pF Silver Mica	...
4	375pF Silver Mica	...
5	200pF Silver Mica	...
6	110pF Silver Mica	...
7	70pF Silver Mica	...
8	50pF Silver Mica	...
9	200pF Silver Mica	...
10	10pF Tubular Ceramic	...
11	1 Tubular	350V
12	0.05 Mica	...
13	1 Tubular	350V
14	100pF Mica	...
15	1pF Twisted Wire	...
16	0.1 Tubular	350V
17	0.1 Tubular	350V
18	400pF Silver Mica	...
19	100pF Silver Mica	...
20	375pF Silver Mica	...
21	200pF Silver Mica	...
22	110pF Silver Mica	...
23	70pF Silver Mica	...
24	200pF Silver Mica	...
25	10pF Ceramic	...
26	50pF Silver Mica	...
27	100pF Silver Mica	...
28	100pF Silver Mica	...
29	100pF Silver Mica	...
30	100pF Silver Mica	...
31	100pF Silver Mica	...
32	10pF Ceramic	...
33	50pF Silver Mica	...
34	200pF Silver Mica	...
35	70pF Silver Mica	...
36	100pF Silver Mica	...
37	180pF Silver Mica	...
38	1 Tubular	350V
39	100pF Silver Mica	...
40	1 Tubular	350V
41	170pF Silver Mica	...
42	300pF Silver Mica	...
43	555pF Silver Mica	...
44	400pF Silver Mica	...
45	1 Tubular	350V
46	1 Tubular	350V
47	1 Tubular	350V
48	10pF Ceramic	...
49	100pF Silver Mica	...
50	200pF Silver Mica	...
51	1 Tubular	350V
52	0.0025 Tubular	350V
53	0.1 Tubular	350V
54	0.002 Tubular	350V
55	0.002 Tubular	350V
56	0.001 Tubular	350V
57	100pF Mica	...
58	100pF Mica	...
59	0.1 Tubular	350V
60	0.5 Tubular	350V
61	0.002 Tubular	1000V
62	0.002 Tubular	1000V
63	0.05 Tubular	350V
64	25 Electrolytic	25V
65	2 Electrolytic	350V
66	16 Electrolytic	350V
67	16 Electrolytic	450V
68	...	...



T2 are MW bandpass trimmers. AVC, decoupled by R20, C45, is applied through R5.

Oscillator is connected in a shunt-fed tuned-anode circuit. The anode coils L37, L39, etc., are switched by S10, through C31, to oscillator anode, of which R9 is the load. The MW coil L57 is provided with trimmer T3 and padder C43. The oscillator tuning capacitor VC3 is switched by S12 through series capacitors C33, C35, C37, C41, C42 to S11 and thence to the coils. On SW1 band C34 is shunted across VC3, whilst C32 is placed across the tuned circuit on all ranges. For the SW bands other than SW1, C44 is placed across VC3.

The grid reaction coils L36, L38, etc., are switched by S9 through C30 to oscillator grid of V2. Automatic bias for grid is developed on C30 with R8 as leak.

IF amplifier operates at 465 kc/s. Secondary L35, C29 of IFT1 feeds signal and AVC voltages, decoupled by R20, C45 to g1 of IF amplifier V3. Cathode bias is provided by R11 and decoupled by C46. Screen (g2) voltage is obtained from R10 and decoupled by C47. Suppressor grid (g3) is strapped to cathode. L58, C49, which form the primary of IFT2, are in the anode circuit.

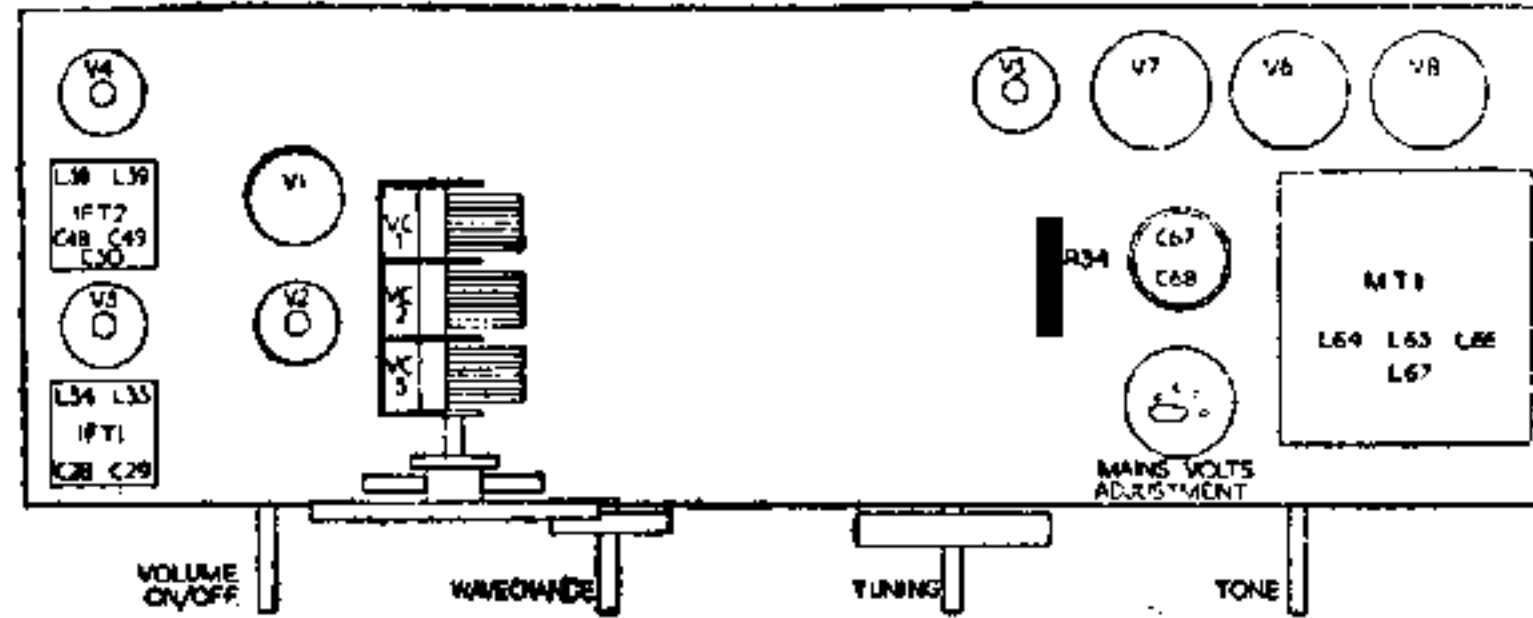
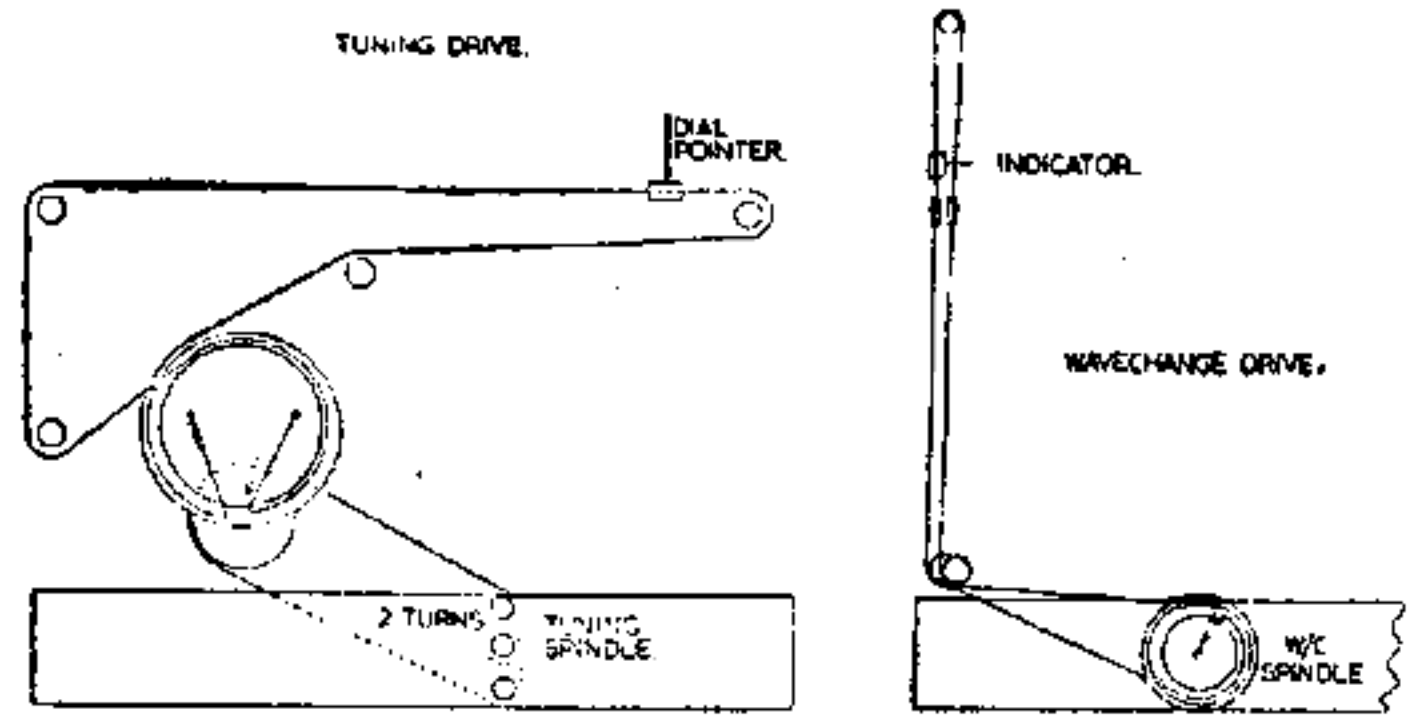
Signal rectifier. Secondary L59, C50 of IFT2 feeds signal to one diode of V4. R16 is load, and R15, C57, C58 form an IF filter.

Tuning indicator. The DC component of the rectified signal is tapped from potential divider R13, R14 and fed to C51 and grid of tuning indicator V9. Cathode is coupled to cathode of V4. R21, R22 are anode load resistors. Target anode voltage is taken from HT line.

AVC. C48 feeds signal from primary of IFT2 to second diode of V4. R19 is its load. AVC voltages decoupled by R20, C45 are fed to control grids of V2 and V3. Cathode voltage of V4 provides a delay bias for the AVC diode.

Apply Signal as Stated Below	Tune Receiver to	Trim in Order Stated for Max. Output
(1) 465 kc/s to fixed plates of VC2 via .01	MW 550 metres	Core L59, L58, L35, L34
(2) 600 kc/s to AE socket vis dummy aerial	500 Metres	Core L57, L33, L22
(3) 1.4 mc/s as above	214 metres	T3, T2, T1 and repeat (2) and (3).
(4) SW Bands		

Alignment of the bandspread ranges should be effected with great care as the normal signal generator is not accurate enough for satisfactory adjustment. Alignment in the factory is effected with crystal controlled apparatus. Should any adjustment be necessary, the receiver should be tuned to a station of known frequency and the oscillator, HF and aerial inductances adjusted in that order for max. output.



Continued on page 48

