K-B Models FG50, FG50TL

General Description : Ten-valve (including rectifier and tuning indicator), eight-waveband superheterodyne auto-radiogramophone with bandspread tuning on six short-wavebands. Released November 1950.

Power Supplies : A.C. mains, 100–130 and 200–250 volts, 50c/s. Consumption : receiver unit, 90 watts; motor unit, 15 watts.

Wavebands :

Model FG50 : L.W. 810–2200 m. (370–135 kc/s.); M.W. 188–560 m. (535–1600 kc/s.); 49-m. band (5·9–6·3 Mc/s.); 31-m. band (9·4–9·8 Mc/s.); 25-m. band (11·6–12·1 Mc/s.); 19-m. band (15·0–15·7 Mc/s.); 16-m. band (17·4–18·2 Mc/s.); 13-m. band (21·2–22·1 Mc/s.).

Model FG50TL : M.W. 188–560 m.; S.W. 37–115 m. (2·6–8·1 Mc/s.); 31-m. band; 25-m. band; 19-m. band; 16-m. band; 13-m. band; 11-m. band (25·5–26·6 Mc/s.).

Output : 10 watts from push–pull output stage.

Intermediate Frequency : 470 kc/s.

Valves : Brimar. (V1) 7H7 (R.F. amplifier); (V2) 6K8GT; (V3) 7R7; (V4) 6U5G; (V5) 6H6GT; (V6) 6SL7GT; (V7) 6SL7GT (second A.F. amplifier and phase splitter); (V8 and V9) 6V6GT (push–pull output stage); (V10) 5Z4G.

Dial Lamps : Four 8 volts, 0·3 amp.

Alignment Procedure : Operations must be carried out in the order indicated. Set the tuning pointer to the datum mark with the gang fully enmeshed. Procedure given is for the FG50.

Operation	*Circuits*	*Signal Generator Connection*	*Input Signal*	*Set Pointer to*	*Adjust for Maximum Response*
1	I.F.	Grid of V3 via 0·1-μF. capacitor	470 kc/s.	M.W. datum	Cores L28, L29
2	I.F.	Grid of V2 via 0·1-μF. capacitor	470 kc/s.	—	Cores L26, L27
3	M.W.	Aerial socket via dummy aerial	600 kc/s.	600 kc/s.	Core L19
4	—	—	1400 kc/s.	1400 kc/s.	T5, T3, T2
5	L.W.	—	175 kc/s.	175 kc/s.	Core L17
6	—	—	350 kc/s.	350 kc/s.	T4, T1
7	49 m.	Via 400-ohm non-inductive resistor	6·1 Mc/s.	6·1 Mc/s.	Core L20
8	31 m.	—	9·6 Mc/s.	9·6 Mc/s.	Core L21
9	25 m.	—	11·8 Mc/s.	11·8 Mc/s.	Core L22
10	19 m.	—	15·3 Mc/s.	15·3 Mc/s.	Core L23
11	16 m.	—	17·8 Mc/s.	17·8 Mc/s.	Core L24
12	13 m.	—	21·6 Mc/s.	21·6 Mc/s.	Core L25

Notes : Owing to the bandspread tuning, a crystal-controlled oscillator is required to check operations Nos. 7–12, since the calibration of the standard type signal generator is not nearly accurate enough. If no such oscillator is available, make final adjustments on a station of known frequency. The second harmonic of the oscillator is used for injection, and this operates on a higher frequency than the input signal on all bands. The operations for each band should be successively repeated.

K-B Models EG50M, EG50TM

General Description : Ten-valve (including rectifier and tuning indicator), eight waveband superheterodyne auto-radiogramophone with band-spread tuning on six short-wavebands. Weight 98 lb.

The chief difference between these models and the FG50 and FG50TL (see page 476) is the use of a 6J5GT single-section A.F. amplifier (V6) instead of the twin-section 6SL7GT.

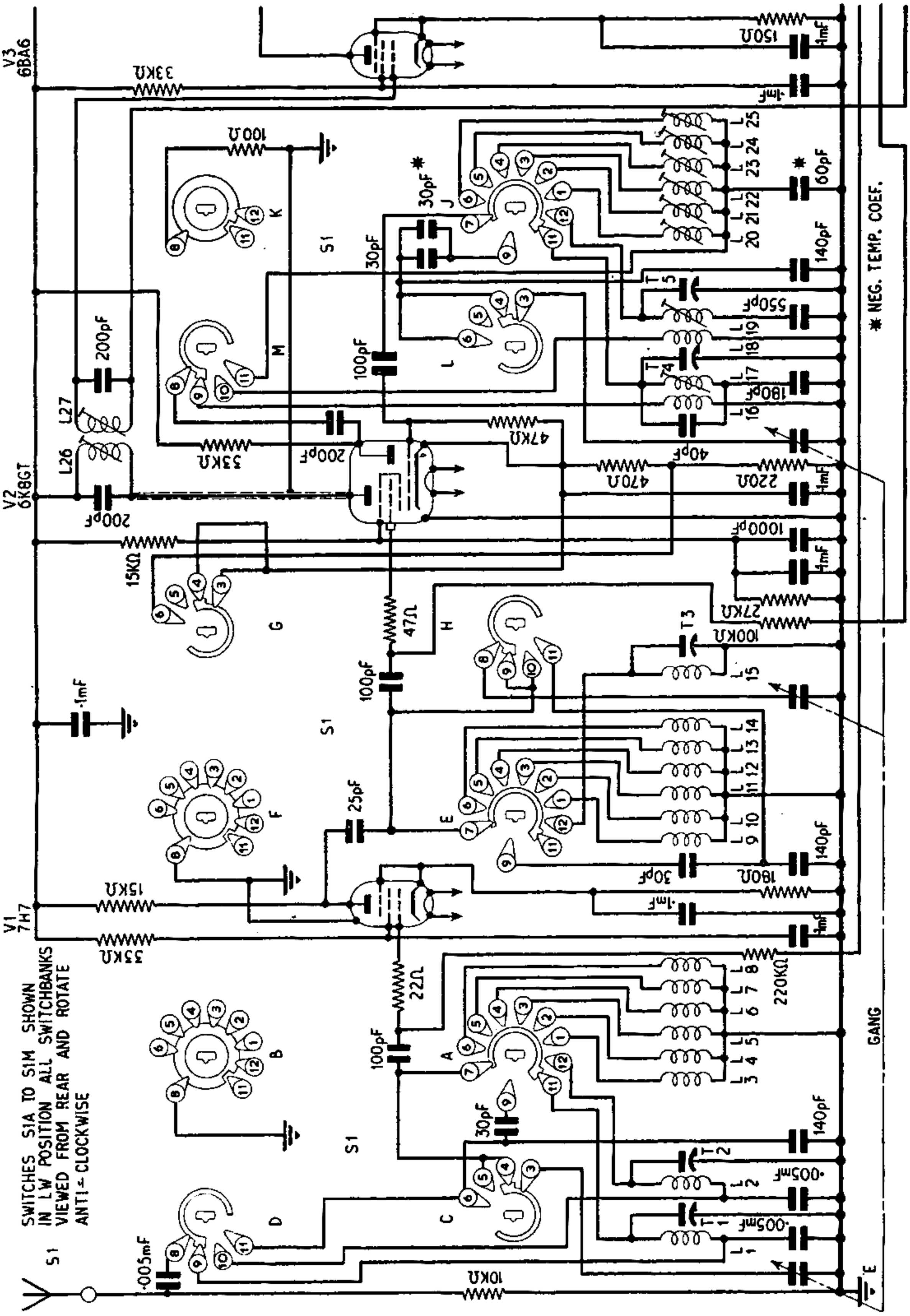
Model EG50M covers similar wavebands to the FG50; while the coverage of the EG50TM corresponds with that of the FG50TL.

Models EG50M, EG50TM, FG50, FG50TL

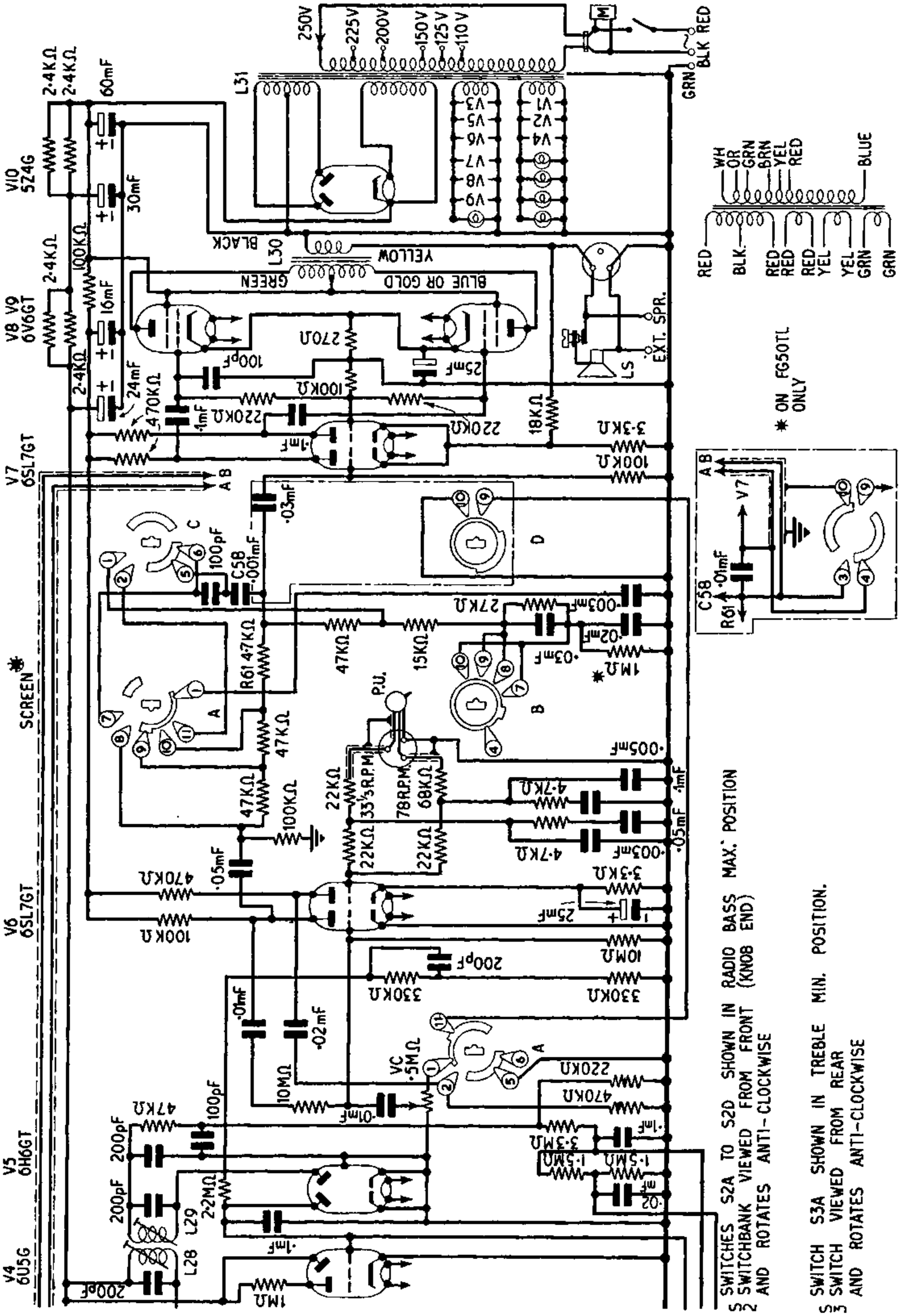
Voltage Chart : The following readings, which should be regarded as approximate, were taken with the bandswitch in M.W. position with the volume control at minimum gain. Mains input 225 volts with adjustment tapping at 225 volts. No aerial or earth connected. Total H.T. current 110 mA.

Valve	*Volts Measured between Socket and Chassis*							
	Pin 1	2	3	4	5	6	7	8
EG50M–EG50TM								
V1	0	112	132	1·9	0	0	1·9	6·3 *
V2	0	6·3 *	218	91	Very small	94	0	5·7
V3	6·3 *	218	0	0	74	0	—	0
V4	—	6·3 *	5	218	0	—	0	0
V5	0	0	0	0	0	0	6·3 *	0
V6	0	0	62	—	—	0	6·3 *	2·1
V7	0	44	0·9	0	44	0·9	6·3 *	0
V8	—	0	296	306	0	150	6·3 *	19
V9	—	6·3 *	296	306	0	0	0	19
V10	—	306	—	260 *	—	260 *	—	306
FG50–FG50TL	(*Where different from EG50 Models.*)							
V3	—	218	0	0	85	0	1	6·3 *
V6	0	42	—	—	15	0·4	6·3 *	0

* A.C. measurement.



MODIFIED K-B MODEL FG50 (R.F. SECTION)



MODIFIED K-B MODEL FG50 (A.F. SECTION)