

K-B

Model HR10

General Description : Five-valve (including rectifier), three-waveband superheterodyne table receiver. Released October 1952.

Power Supply : A.C. mains, 200-250 volts, 50-100 c/s., 40 watts.

Wavebands : L.W. 880-2100 m. (340-142 kc/s.); M.W. 187-570 m. (1610-525 kc/s.); S.W. 16.3-51 m. (18.4-5.8 Mc/s.).

Intermediate Frequency : 422 kc/s.

Output : 3 watts to a 6-in. permanent-magnet speaker.

Valves : Brimar (V₁) 6BE6; (V₂) 6BA6; (V₃) 6AT6; (V₄) 6AQ5; (V₅) 6X4.

Dial Lamps : 6.3 volts, 0.2 amp. M.E.S. type.

Notes : H.T. fuse, 250 mA. A temperature fuse link is incorporated in the mains transformer. Should a short-circuit occur that releases the fuse link, soft solder should be used when reconnecting.

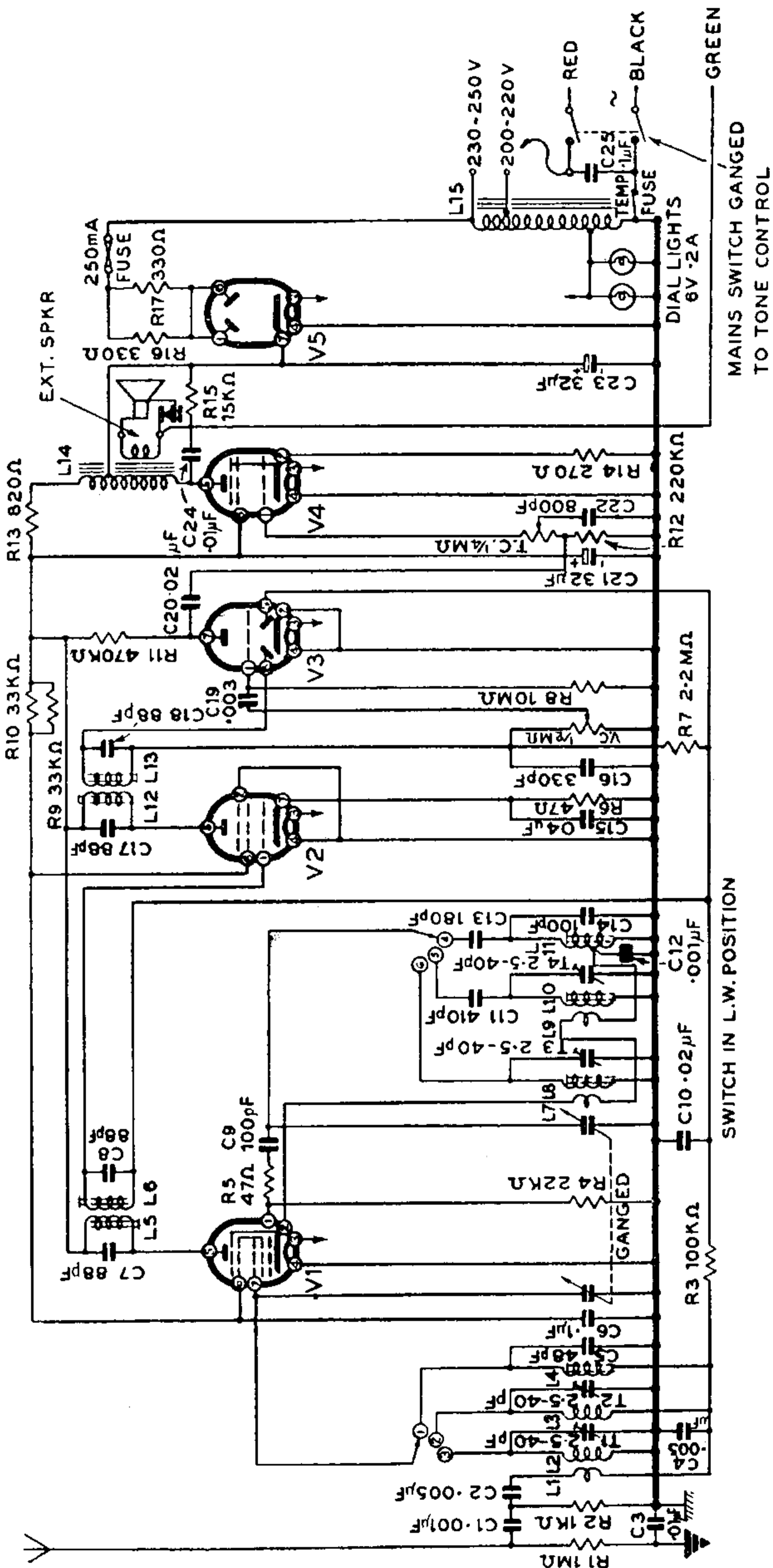
Alignment Procedure : As the scale is fixed to the cabinet, calibration lines are marked on the scale back-plate. The operations for each waveband should be successively repeated until scale accuracy and maximum sensitivity have been attained. Medium wave should be checked after the long-wave alignment has been completed and operations 2 and 3 repeated if necessary. *Warning*—Chassis may be "Live"

Operation	Circuit	Signal Generator Connection	Input Signal	Tuning Pointer	Adjust for Maximum Response
1	I.F.	Grid V ₁ via 0.1 μ F.	422 kc/s.	M.W. datum	L ₁₃ , L ₁₂ , L ₅ , L ₆
2	M.W.	Aerial socket via dummy aerial	600 kc/s.	500 m.	Cores L ₉ , L ₁₀
3	M.W.	" "	1400 kc/s.	214 m.	Trimmers T ₄ , T ₂
4	L.W.	" "	225 kc/s.	1333 m.	Cores L ₁₁ , L ₄
5	S.W.	" "	6 Mc/s.	50 m.	Cores L ₈ , L ₇
6	S.W.	" "	15 Mc/s.	20 m.	Trimmers T ₃ , T ₁

Valve Analysis : The following readings were taken with the bandswitch in the M.W. position, volume control at minimum gain, aerial and earth disconnected. Mains voltage 240 volts. Receiver adjusted to 240-volt tap. Total mains current 153 mA., H.T. current 59 mA.

Valve	Volts Measured between Socket and Chassis						
	Pin 1	2	3	4	5	6	7
V ₁	SN	—	6.3 A.C.	—	222	81	SN
V ₂	SN	—	6.3 A.C.	—	222	81	0.4
V ₃	SN	—	6.3 A.C.	—	SN	SN	52
V ₄	—	10	6.3 A.C.	—	232	222	—
V ₅	221 A.C.	220	6.3 A.C.	—	—	221 A.C.	239

SN, slightly negative.



CIRCUIT DIAGRAM—K-B MODEL HR10

D.C. Resistance of Inductors.

L1	Less than 1	L7	Less than 1
L2	Less than 1	L8	Less than 1
L3	Less than 1	L9	Less than 1
L4	3.4	L10	4.4
L5	18	L11	8
L6	20	L12	20

L13	20
L14 (Pri.)	510
L14 (Pri.)	Tap to finish, 1.5
L14 (Sec.)	Less than 1
L15	Start to heater tap, less than 1
L15	Start to finish, 153

MAINS SWITCH GANGED TO TONE CONTROL

SWITCH IN L.W. POSITION