

K-B

Models FR15, DR15, ER15

General Description : Five-valve (including rectifier), three-waveband superheterodyne receiver. Release dates as for Models FR10, DR10, ER10 (page 474).

Power Supply : A.C./D.C. mains, 200–250 volts (A.C. 50–100 c/s.). Consumption 50 watts.

Wavebands : L.W. 740–2100 m. (410–142 kc/s.); M.W. 187–585 m. (1610–570 kc/s.); S.W. 16·3–51 m. (18·4–5·9 Mc/s.).

Output : 2 watts. Sockets are provided for a 2–4-ohm-impedance external loudspeaker. Internal 8-in. loudspeaker may be disconnected by means of screw switch.

Intermediate Frequency : 465 kc/s.

Valves : Brimar. (V₁) 12K8GT; (V₂) 12K7GT; (V₃) 12Q7GT; (V₄) 35L6GT; (V₅) 35Z4GT. The barretter is a Brimar type D15.

Dial Lamps : Two 4·5 volts, 0·15 amp. M.E.S. fitting.

Inductor Colour Coding : S.W. aerial—red, red; S.W. osc.—red, orange; M.W. aerial—red, yellow; M.W. osc.—red, green; L.W. aerial—red, blue; L.W. osc.—red, violet.

Alignment Procedure : Operations must be carried out in the order indicated. The tuning pointer should be set to the datum mark with the gang fully in mesh. *Warning*—Chassis may be “Live”.

Operation	Circuits	Signal Generator Connection	Input Signal	Tuning Pointer *	Adjust for Maximum Response
1	I.F.	Grid of V ₁ via 0·1- μ F. capacitor	465 kc/s.	M.W. datum	L ₁₄ , L ₁₃ , L ₁₂ and L ₁₁
2	M.W.	Aerial socket via dummy aerial	1400 kc/s.	214-m. mark	T ₅ and T ₂
3	—	—	600 kc/s.	500-m. mark	Core L8
4	L.W.	—	350 kc/s.	860-m. mark	T ₆ and T ₃
5	—	—	175 kc/s.	1714-m. mark	Core L9
6	S.W.	—	15 Mc/s.	20-m. mark	T ₄ and T ₁
7	—	—	6 Mc/s.	50-m. mark	Core L7

* Calibration lines are marked on the scale back plate; only the centre pointer is used in reference to these marks.

Notes : The gang should be rocked slightly whilst finally adjusting the aerial trimmers. The operations for each waveband should be successively repeated until scale accuracy and maximum sensitivity have been attained. M.W. adjustments should be re-checked after L.W. alignment. Select lesser capacitance position of T₄ during S.W. alignment.

Viewed from beneath the chassis, trimmer and core lay-out is as follows:

L ₁ -L ₂	L ₃	L ₄	T ₃ T ₂ T ₁	T ₆ T ₅ T ₄	L ₆ -L ₇	L ₈	L ₉
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Voltage Chart : Following readings were taken with band switch in M.W. position, volume control at minimum gain and aerial and earth disconnected. Mains input 225 volts with adjustment set at 250 volts. Total mains current 294 mA. Total H.T. current 55 mA.

(continued on page 472)

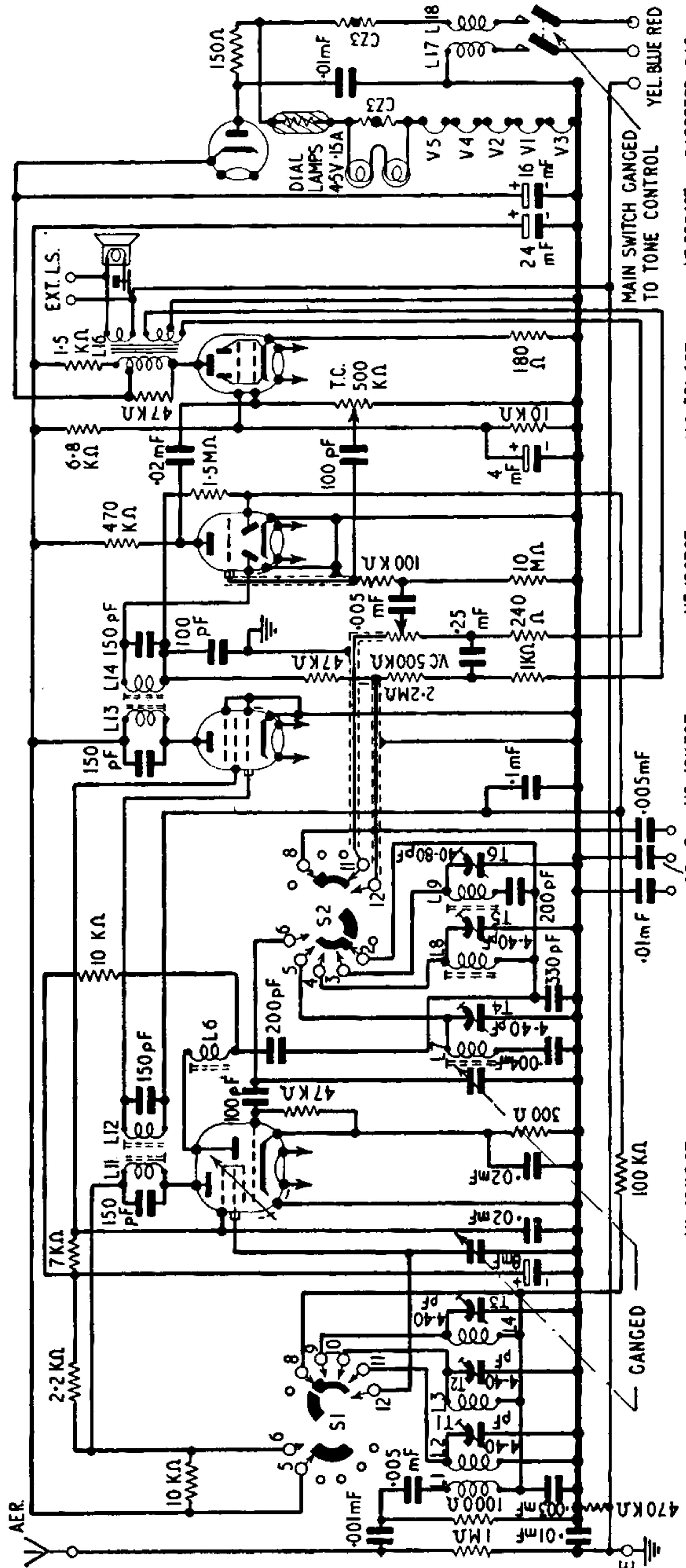
K-B—MODELS FR₁₅, DR₁₅, ER₁₅, (*continued from page 470*).

Valve	Volts Measured between Socket and Chassis							
	Pin 1	2	3	4	5	6	7	8
V ₁	E	*	135	80	—	81	*	2.4
V ₂	E	*	135	80	E	115	*	E
V ₃	E	*	30	—	—	—	*	E
V ₄	E	*	169	78	—	135	*	5
V ₅	185 †	*	135	—	185 †	180	*	180

* Heater line (current 145 mA.).

† A.C. measurements.

KOLSTER-BRANDS



The diagram shows a three-winding transformer with three vertical legs. The left leg has a tap labeled 'L16'. The top winding has three tap points labeled 'YELLOW', 'BLACK', and 'RED' from left to right. The bottom winding has three tap points labeled 'RED', 'BLACK', and 'GREEN' from left to right.

18. MEDIUM WAVE

•617. SHORT WAY

NUMBER OF SWITCHING
MOVEMENTS CLOCKWISE: GRAIN
SHORTEST, MEDIUM, SHORTEST.
SWITCHES SHOWN IN CRAM
SECTION VIEWED FROM KNOB

L3. MEDIUM WAVE

ULS SHORT WAVE