

# ADVANCE TECHNICAL INFORMATION

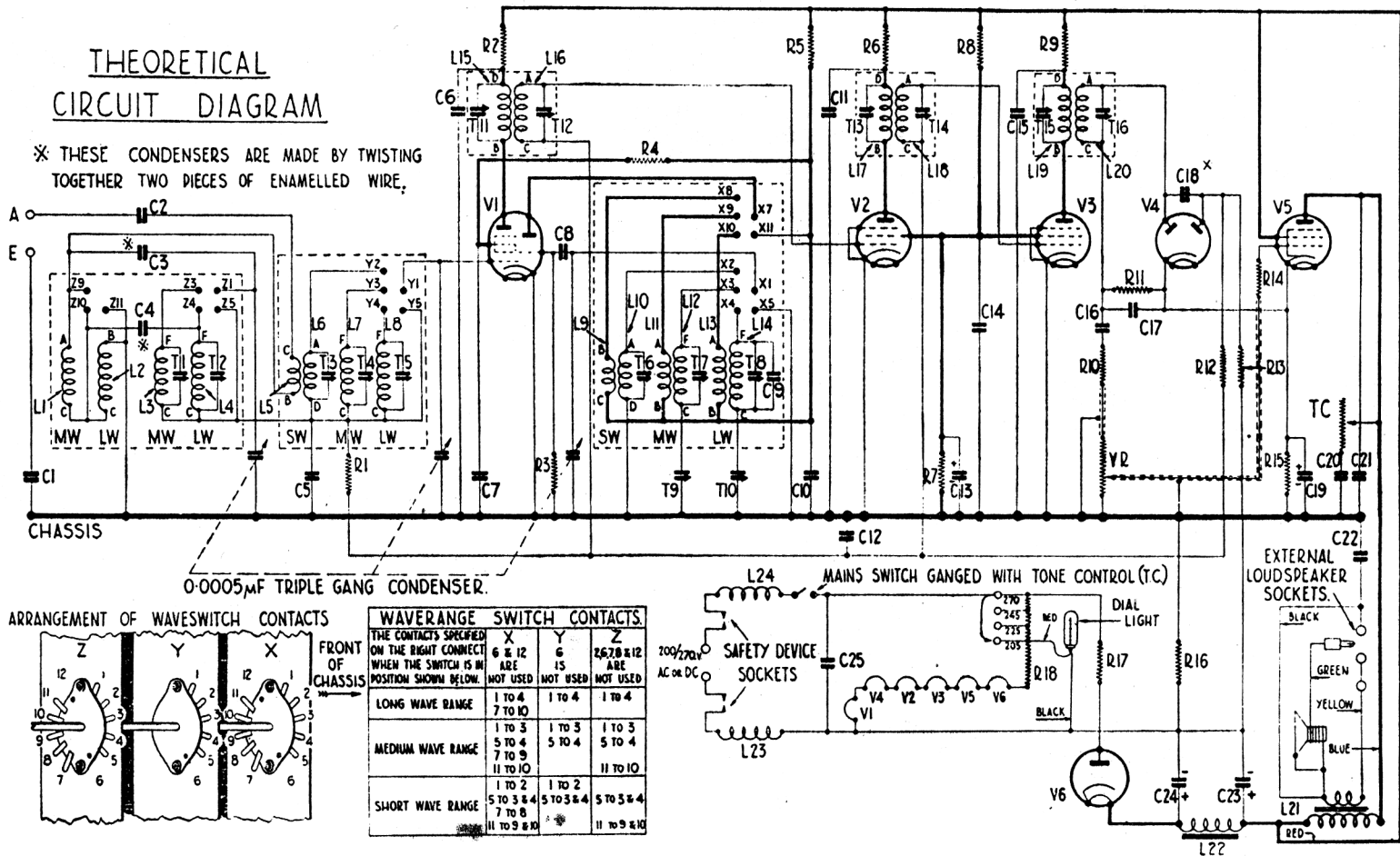
K.B. 632 5-VALVE & RECTIFIER ALL-WAVE SUPERHETERODYNE RECEIVER.  
FOR A.C./D.C. MAINS OPERATION.

# KB 632

## 1. GENERAL.

This receiver is designed to operate on AC/DC supplies, voltages 195 to 270 (40-60 cycles per second in the case of A.C.). The dial lamp is rated at 230 volts, 15 watts and the total power consumed by the receiver is 85 watts. Details of wave-ranges covered and the correct method of operation will be found in the instruction booklet supplied with the receiver.

## 2. CIRCUIT DIAGRAM.



### 3. KEY TO CIRCUIT DIAGRAM.

Resistances.		Condensers.	
Code.	Resistance.	Code.	Capacity.
R1.	100,000 ohms	C1.	0.01 microfarad
R2.	5,000 "	C2.	0.01 "
R3.	50,000 "	C3.	18 micromicrofarads
R4.	15,000 "	C4.	18 "
R5.	10,000 "(2 watts)	C5.	0.02 microfarad
R6.	5,000 "	C6.	0.1 "
R7.	12,000 "(1 watt)	C7.	0.1 "
R8.	20,000 "(2 watts)	C8.	0.00005 "
R9.	5,000 "	C9.	0.00007 "
R10.	100,000 "	C10.	0.1 "
R11.	500,000 "	C11.	0.1 "
R12.	500,000 "	C12.	0.1 "
R13.	500,000 "	C13.	2 "(electrolytic)
R14.	7,000 "	C14.	0.1 "
R15.	150 "	C15.	0.1 "
R16.	40 "	C16.	0.02 "
R17.	75 "	C17.	0.0005 "
R18.	Mains heater resistance	C18.	15 micromicrofarads
VR.	50,000 ohms	C19.	25 microfarads (electrolytic)
TC.	50,000 "	C20.	0.01 "
		C21.	0.0005 "
		C22.	0.01 "
		C23.	16 "
		C24.	16 "
		C25.	0.01 (1.500v).

### INDUCTANCES.

- L 1. Aerial medium wave primary coil.
- L 2. Aerial long wave primary coil.
- L 3. Aerial medium wave secondary coil.
- L 4. Aerial long wave secondary coil.
- L 5. Aerial short wave primary coil.
- L 6. Aerial short wave secondary coil.
- L 7. Grid medium wave secondary coil.
- L 8. Grid long wave secondary coil.
- L 9. Oscillator short wave primary coil.
- L10. Oscillator short wave secondary coil.
- L 11. Oscillator medium wave primary coil.
- L 12. Oscillator medium wave secondary coil.
- L 13. Oscillator long wave primary coil.
- L 14. Oscillator long wave secondary coil.
- L 15. L 17 and L 19 I.F. primary coils.
- L 16. L 18 and L 20 I.F. secondary coil.
- L 21. Speaker output transformer.
- L 22. Smoothing choke.
- L 23 and L 24 mains filter chokes.

### APPROVED VALVES.

Valve	Type		Maker
V1	T.H. 22 C	Frequency changer	"Mullard"
V2	9 D. 2	I.F. pentode	"Brimar"
V3	9 D. 2	I.F. pentode	"
V4	10 D. 1	Double-diode	"
V5	7 D. 6	Output pentode	"
V6	1 D. 5	Rectifier	"

### 5. VOLTAGES.

Voltagcs measured with instrument of sensitivity 1,000 ohms per volt. 245 volts were applied to the 245 volts tapping and the aerial and earth sockets were disconnected.

VALVE	Voltage between chassis and:—			
	Anode	Screening or Priming Grid	Cathode	Oscillator Anode
V1	225v	75v	0v	120v
V2	215v	75v	0v	—
V3	212v	75v	0v	—
V4	—	—	6½v	—
V5	225v	240v	6½v	—

Maximum rectified H.T. voltage — 255v.  
H.T. voltage after smoothing — 240v.

### 6. CIRCUIT ALIGNMENT.

The I.F. transformer trimmers T11, T12, T13, T14, T15, and T16 are trimmed at 464 K/cs.  
Connect the signal generator leads to A and E sockets. Connect output meter. Set the signal generator to 1,400 K/cs (214 metres) and the receiver gang condenser to this position and trim T1, T4, and T7. Reset the generator and receiver to 600 Kc/s (500 metres) and adjust T9 until the output meter indicates the maximum output. T9 is the NUT of the double padding condenser.  
Set receiver and generator to 250 Kc/s (1,200 metres) and trim T2, T5, T8. Next at 175 K/cs (1,714 metres) adjust T10 (this is the SCREW of the double padding condenser) until output meter indicates the maximum output obtainable. Repeat the long wave alignment until the calibration is correct over the complete range. For short wave T3 and T6 must be first adjusted at 17 megacycles (17.6 metres) and checked at 6 megacycles (50 metres). When the above procedure is followed in the order indicated the calibration and general alignment should be correct over all wave ranges.