

**MODEL  
L74MA**

# Hotpoint BAND-MASTER

## SERVICE DATA & TECHNICAL INFORMATION

**FOUR VALVE, BROADCAST,  
SUPERHETERODYNE**

**AUSTRALIAN  
GENERAL ELECTRIC  
PROPRIETARY LIMITED**

**DRY-CELL BATTERY  
OPERATED**

### ELECTRICAL SPECIFICATIONS.

**Frequency Range** ..... 540-1600 Kc/s (555-187.5 metres)  
**Intermediate Frequency** ..... 455 Kc/s  
**Battery Complement** .... One 7½V, 9V-90V Battery Pack No. 753  
**Battery Consumption** ..... L.T. 50 mA H.T. 12 mA  
**Loudspeaker (Permanent Magnet)** ..... 4 inch — code No. BH1  
**Transformer** ..... XA220  
**V.C. Impedance** ..... 3 ohms at 400 C.P.S.  
**Undistorted Power Output** ..... 200 milliwatts

#### Power Unit Operation:

The receiver may be operated on the following voltage ranges by altering the transformer tapings:

- 200-215 volts
- 216-230 volts
- 231-245 volts
- 246-260 volts

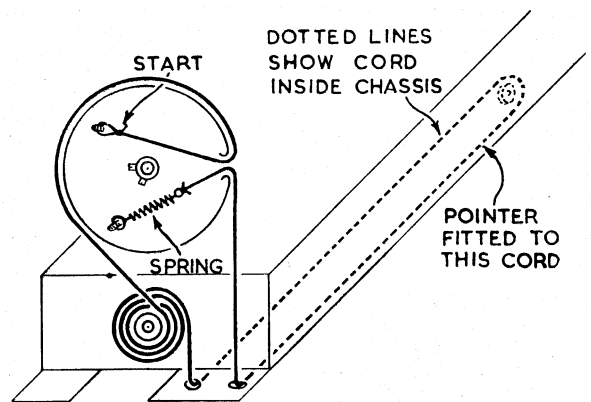
**Power Unit Frequency Range** ..... 50-60 C.P.S. and 40 C.P.S.

#### Valve Complement:

- (1) 1R5 Converter
- (2) 1T4 I.F. Amplifier
- (3) 1S5 Detector, A.F. Amplifier, A.V.C.
- (4) 3V4 Output

#### Controls:

ON/OFF-Volume Control — left hand end of cabinet.  
Tuning Control — right hand end of cabinet.



#### Drive Cord Replacement:

The accompanying diagram shows the route of the cord and the method of attachment.

### ALIGNMENT PROCEDURE.

#### Manufacturer's Setting of Adjustments.

The receiver is tested by the manufacturer with precision instruments and all adjusting screws are sealed. Re-alignment should be necessary only when components in tuned circuits are repaired or replaced, or when it is found that the seals over the adjusting screws are broken.

It is especially important that the adjustments should not be altered, unless in association with the correct testing instruments listed below.

Under no circumstances should the plates of the ganged tuning capacitor be bent, as the unit is accurately aligned

during manufacture and cannot be re-adjusted unless by skilled operators using special equipment.

For all alignment operations, keep the generator output as low as possible to avoid A.V.C. action, and set the volume control in the maximum clockwise position.

#### Testing Instruments.

- (1) A.W.A. Junior Signal Generator, type 2R3911, or, A.W.A. Modulated Oscillator, type J6726.  
If the modulated oscillator is used, connect a 0.25 megohm non-inductive resistor across the output terminals.
- (2) A.W.A. Output Meter, type 2M8832.

## ALIGNMENT TABLE.

Order	Connect "high" side of Generator to:	Tune Generator to:	Tune Receiver to:	Adjust for maximum peak output.
NOTE: If loop leads protruding from the chassis are disconnected, connect a 1 megohm resistor across them.				
1	Grid of 1T4 * (I.F. Amp.)	455 Kc/s	Gang in full mesh	L7 and L6 Cores
2	Aerial Section of Gang * (Drive End)	455 Kc/s	Gang in full mesh	L5 and L4 Cores
With weak valves greater sensitivity may be obtained by aligning all I.F. cores from the 1R5 grid. If any instability occurs, however, the alignment procedure as above should be adhered to.				
The chassis should now be fitted in the cabinet, the resistor removed from the loop leads and the leads then connected to the aerial in the hinged back lid. The battery must be in place in the cabinet or a dummy battery fitted.				
3	Inductively coupled to loop †	600 Kc/s	600 Kc/s (approx. 10 on dial)	L.F. Osc. Core Adj. (L3) § ‡
4	Inductively coupled to loop †	1650 Kc/s	Gang fully open	H.F. Osc. Adj. (C8) ‡
5	Inductively coupled to loop †	1500 Kc/s	1500 Kc/s (approx. 90 on dial)	H.F. Aer. Adj. (C2) ‡
Repeat adjustments 3 and 5 until the maximum output is obtained.				

\* A 0.001  $\mu$ F capacitor should be connected in series with the high side of the test instrument.

† A coil comprising 3 turns of 16 gauge D.C.C. wire and about 6 inches in diameter should be connected between the output terminals of the test instrument, placed co-axial with the loop and distant not less than 1 foot from it.

§ Rock the tuning control back and forth through the signal.

‡ These adjustments are accessible through 3 holes in the cabinet back.

## SOCKET VOLTAGES.

Valve	Bias Volts	Screen to Chassis Volts	Anode to Chassis Volts	Anode Current mA	Filament Volts *
1R5 Converter .....	0	45	45	0.4	1.3 - 1.4
1T4 I.F. Amp. ....	0	35	90	1.0	1.3 - 1.4
1S5 Det., A.F. Amp., A.V.C. ....	0	20†	30†	0.1	1.3 - 1.4
3V4 Output .....	-5	90	88	6.0	2.6 - 2.8

\* These will rise to 1.5V and 3.0V with a new battery.

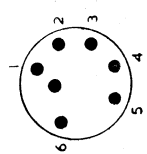
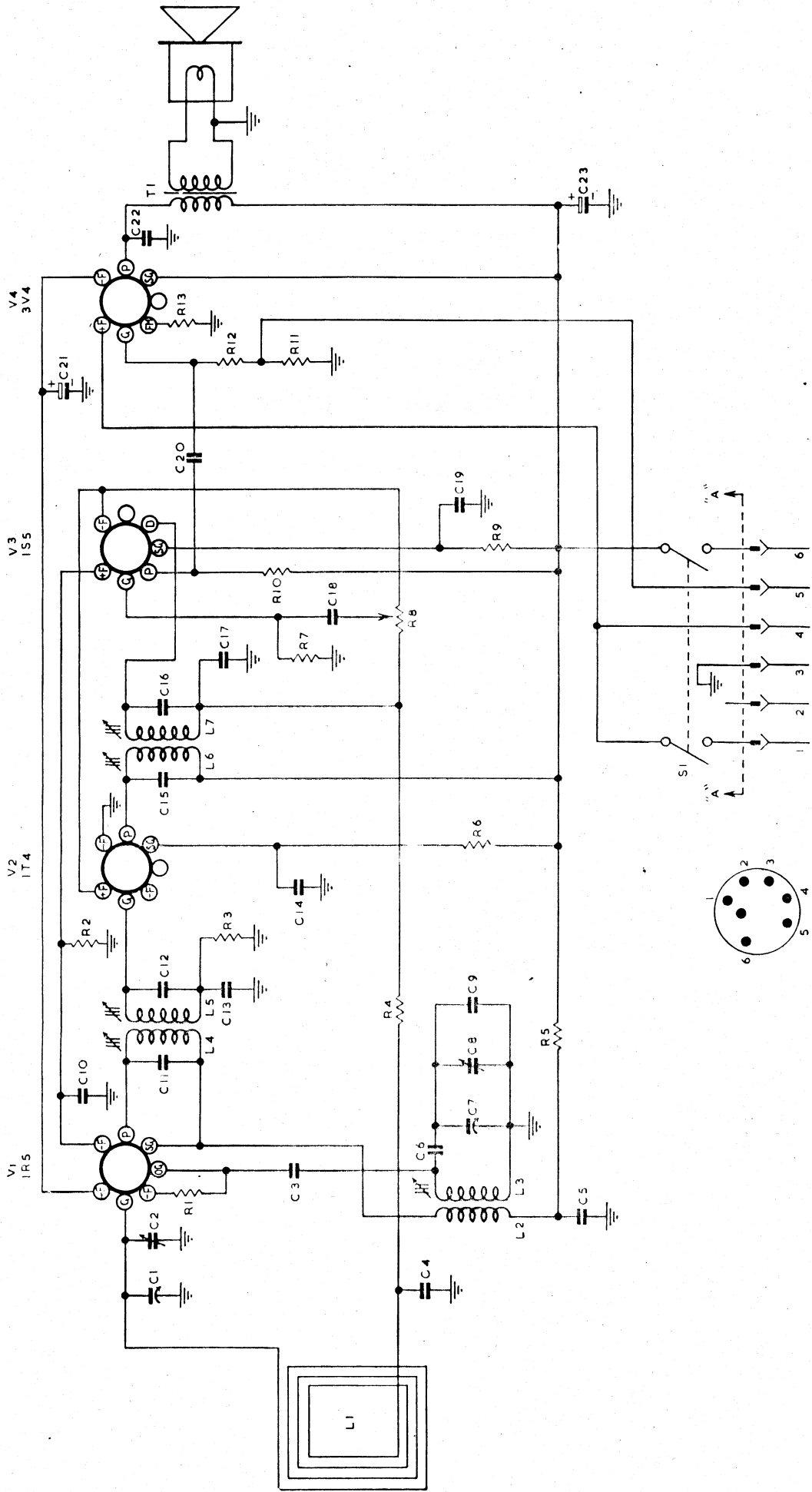
† Calculated from measured current. An ordinary voltmeter will register a lower value.

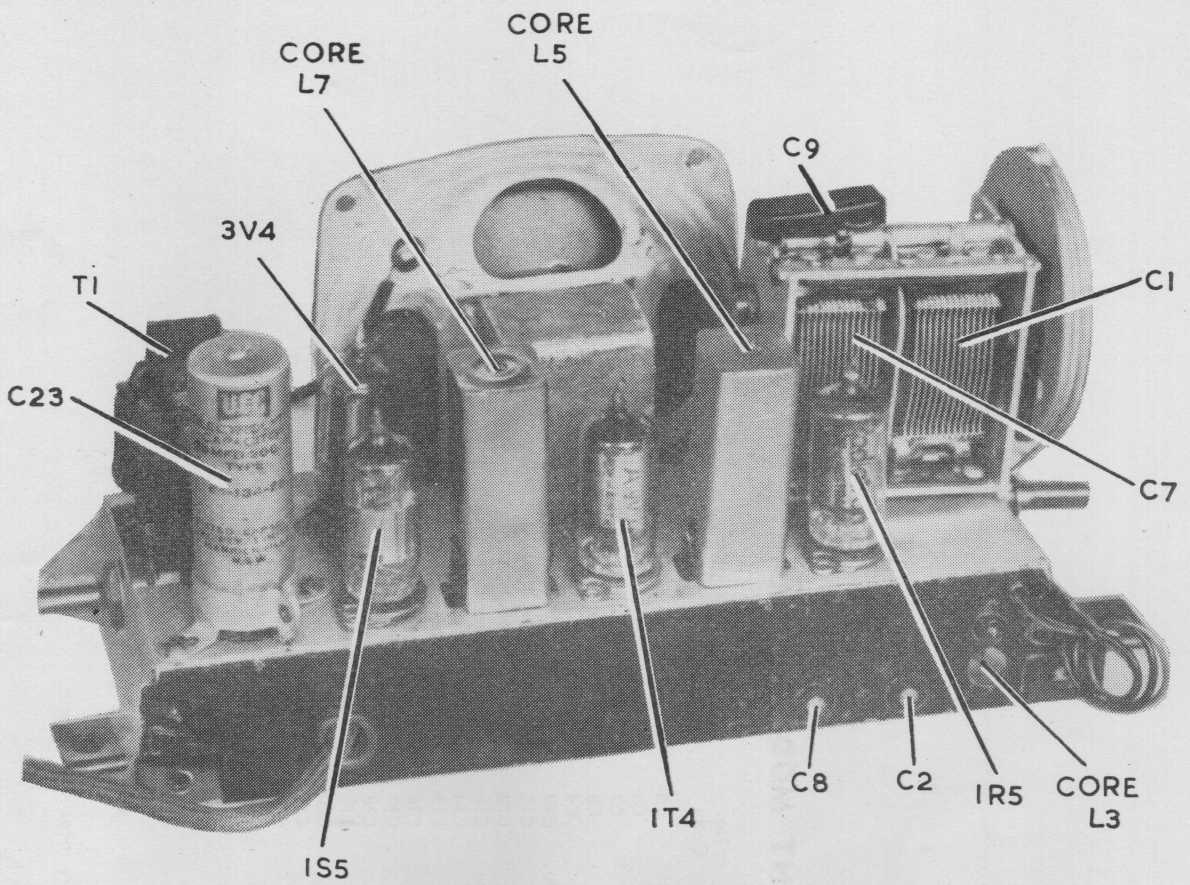
Measured with no signal input. Volume Control maximum clockwise.

# CIRCUIT CODE HOTPOINT MODEL L74MA

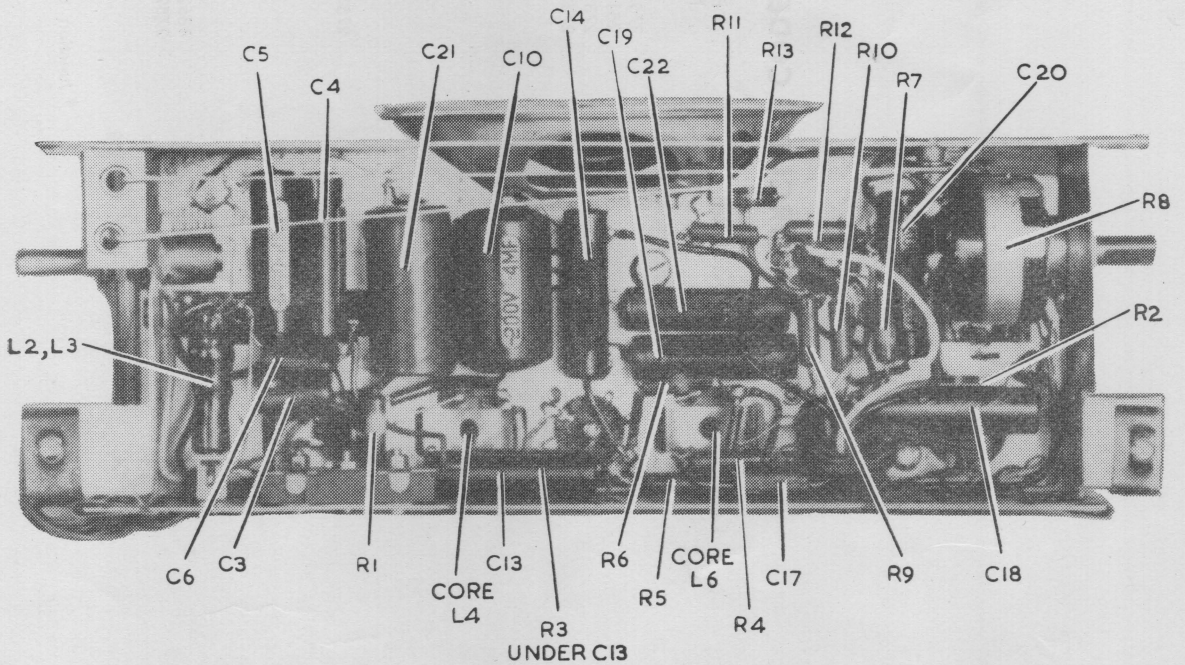
Code No.	Description	Part No.	No. Code	Description	Part No.
L1	Loop Aerial Coil	27534	C5	0.05 $\mu$ F paper 200V working	
L2, L3	Oscillator Coil	25145	C6	470 $\mu$ F padder $\pm 2\frac{1}{2}\%$	
L4, L5	1st I.F. Transformer	27324	C7	12-445 $\mu$ F Tuning	18621
L6, L7	2nd I.F. Transformer	27324	C8	3-25 $\mu$ F trimmer	27526
	<b>RESISTORS</b>		C9	14 $\mu$ F mica	
R1	0.1 megohm $\frac{1}{2}$ watt		C10	0.4 $\mu$ F paper 200V working	
R2	800 ohms $\frac{1}{2}$ "		C11	47 $\mu$ F silvered mica	
R3	2.5 megohms $\frac{1}{2}$ "		C12	47 $\mu$ F silvered mica	
R4	2.5 megohms $\frac{1}{2}$ "		C13	0.05 $\mu$ F paper 200V working	
R5	20,000 ohms $\frac{1}{2}$ "		C14	0.05 $\mu$ F paper 200V working	
R6	0.25 megohm $\frac{1}{2}$ "		C15	47 $\mu$ F silvered mica	
R7	10 megohms $\frac{1}{2}$ "		C16	47 $\mu$ F silvered mica	
R8	1.0 megohm Volume Control (Incl. S1)		C17	200 $\mu$ F mica	
R9	3.2 megohms $\frac{1}{2}$ watt	27530	C18	0.025 $\mu$ F paper 400V working	
R10	0.63 megohm $\frac{1}{2}$ "		C19	0.05 $\mu$ F paper 200V working	
R11	Not used*		C20	0.025 $\mu$ F paper 400V working	
R12	1.0 megohm $\frac{1}{2}$ "		C21	25 $\mu$ F 40 P.V. Electrolytic	
R13	800 ohms $\frac{1}{2}$ "		C22	0.0025 $\mu$ F paper 600V working.	
	<b>CAPACITORS</b>		C23	20 $\mu$ F 200 P.V. Electrolytic	
C1	12-445 $\mu$ F Tuning	18621	T1	TRANSFORMER	XA220
C2	3-25 $\mu$ F trimmer	27526		Loudspeaker Transformer	
C3	70 $\mu$ F mica			LOUDSPEAKER	
C4	0.05 $\mu$ F paper 200V working		S1	4 inch permanent magnet SWITCH	BH1
				ON/OFF Switch (on R8)	

\* Junction of R12 and battery negative to earth.





CHASSIS TOP VIEW MODEL L74MA



CHASSIS UNDERNEATH VIEW MODEL L74MA

NOTE: Owing to substitution, the position of some capacitors may be altered from the layout shown in these chassis views.