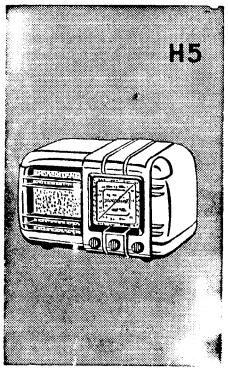


Hotpoint
BAND-MASTER

MODEL
H54MVZ

SERVICE DATA & TECHNICAL INFORMATION

VIBRATOR OPERATED SUPERHETERODYNE

AUSTRALIAN GENERAL ELECTRIC PROPRIETARY LIMITED

FOUR VALVE, BROADCAST

ELECTRICAL SPECIFICATIONS.

Frequency Range	540-1600 Kc/s (555-187.5 M)
Intermediate Frequency	455 Kc/s
Battery Complement	4-volt Accumulator
Battery Consumption	0.8 amp.
Vibrator Power Unit	20420
Vibrator Cartridge	A.W.A.-OAK type V5278
Dial Lamps	6.3 volt, 0.25 amp. M.E.S.
Fuse	3-amp. Cartridge

Valve Complement:

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

Loudspeaker (Permanent Magnet):

5 inch—code number AC50
Transformer —XA20
V.C. Impedance 3 ohms at 400 C.P.S.

Undistorted Power Output ..... 200 milliwatts

GENERAL DESCRIPTION.

The model **H54MVZ** is a vibrator operated mantel model designed for the reception of Medium Wave Broadcast.

Features of design include: Tropic-proof construction, automatic volume control, magnetite cores inI.F. transformers and oscillator coil, air-dielectric trimming capacitors and staight-line edge-lighted dial.

MECHANICAL SPECIFICATIONS.

	Height	Width	Depth
Cabinet Dimensions (ins.)	$8\frac{1}{4}$	$12\frac{3}{4}$	$6\frac{3}{4}$
Chassis Base Dimensions (ins.)	$2\frac{1}{2}$	11	$5\frac{1}{2}$
Carton Dimensions (ins.)	10	16	10

Weight (nett)	15lbs.
Cabinet Finish	Moulded Plastic
Cabinet Colours	Ivory, Walnut, Burgundy

SOCKET VOLTAGES. MODEL H54MVZ.

Valve	Bias Volts	Screen Grid to Chassis Volts	Anode to Chassis Volts	Anode Current mA	Filament Volts
1R5 Converter	0	45	45	0.5	1.3-1.4
1T4 I.F. Amp.	0	45	85	2.7	1.3-1.4
1S5 Det., A.F. Amp., A.V.C.	0	25*	20*	0.07	1.3-1.4
3V4 Output	—6.5*	90	85	8.0	1.3-1.4

Total Battery Current—0.8 amp.

Measured with no signal input. Volume Control maximum clockwise.

*These readings may vary depending on the resistance of the voltmeter used.

D.C. RESISTANCE OF WINDINGS.

Winding	D.C. Resistance in Ohms
Aerial Coil	
Primary (L2)	9.5
Secondary (L3)	3.5
Oscillator Coil	
Primary (L4)	2
Secondary (L5)	6.5
I.F. Transformer Windings	10
I.F. Filter (L1)	17.5*
L.T. Choke (L12)	†
H.T. Choke (L13)	200
R.F. Choke (L10)	9
R.F. Choke (L11)	†
Loudspeaker Input Transformer (T2)	
Primary	540 or 650
Secondary	†
Vibrator Transformer (T1)	
Primary	†
Secondary	500

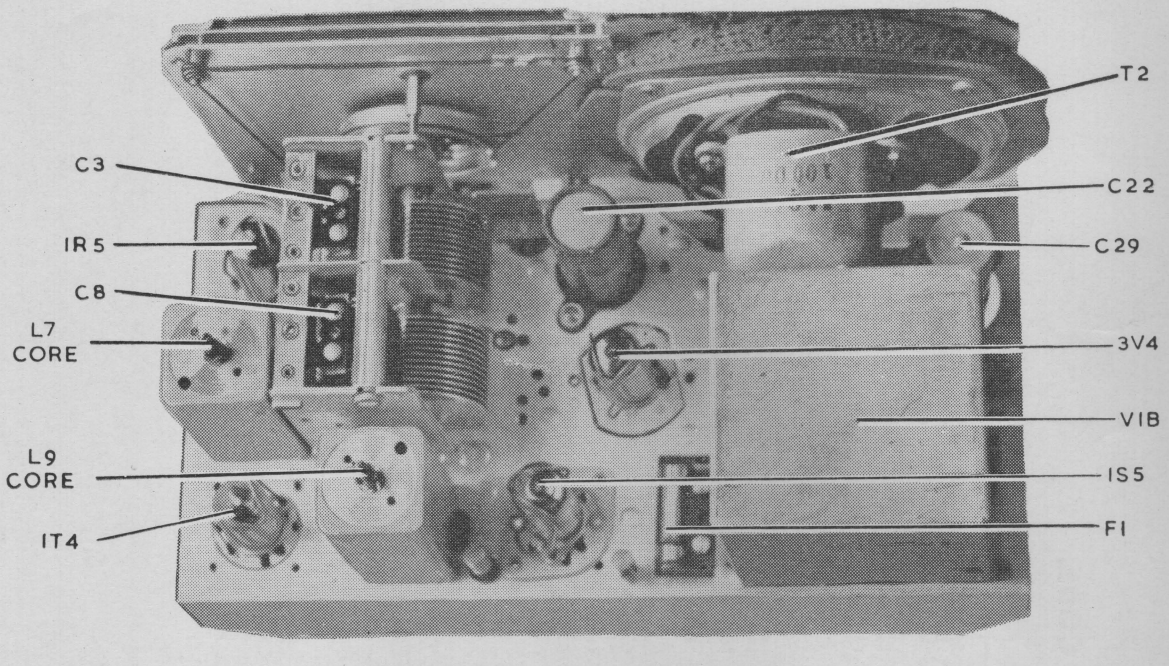
*In some receivers this reading may be as high as 60 ohms.

† Less than 1 ohm.

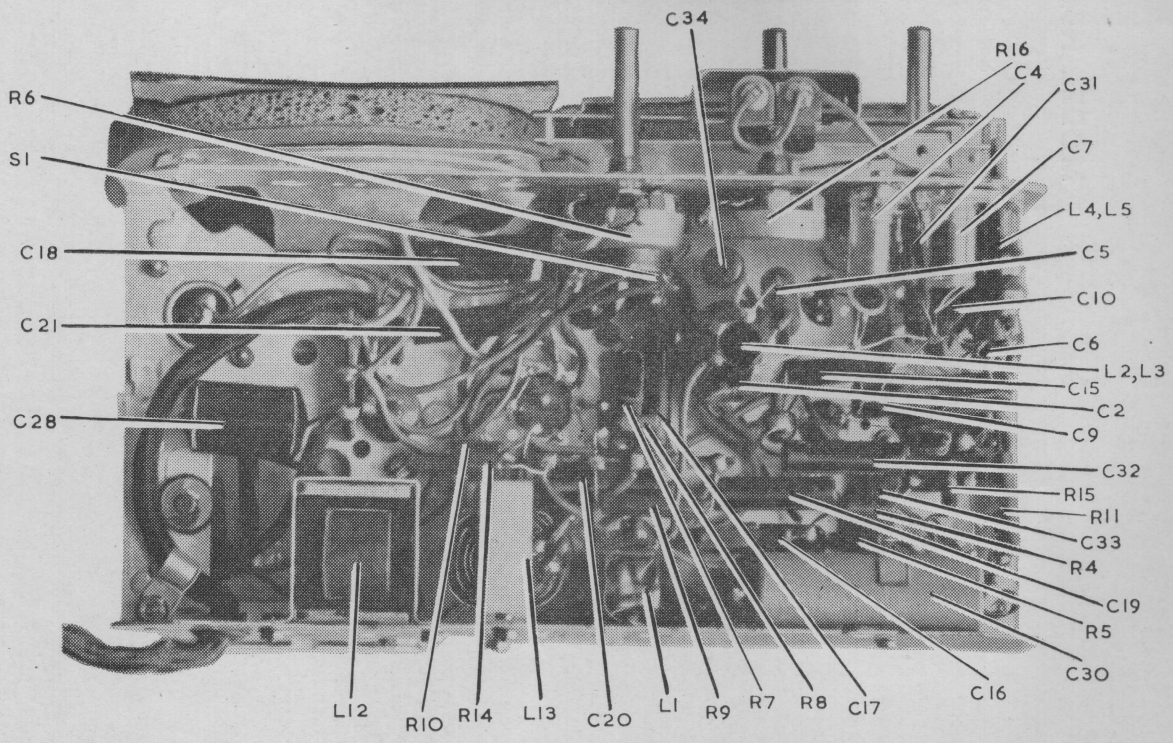
The above readings were taken on a standard chassis but substitution of materials during manufacture may cause variations, and it should not be assumed that a component is faulty if a slightly different reading is obtained.

MECHANICAL REPLACEMENT PARTS.

Item	Part No.
Cabinet	20090
Cable, Battery	17644
Volume	23935
Chassis, End	
Left-hand	20124
Right-hand	22417
Dial, Light Cowl	25554
Pointer	25572
Scale	23375C
Drum	24233
Front Plate	25551
Knob	17603
Panel Fuse	19158
Socket Valve	19965
Spindle Drive	25563
Strip, Tag	
1 way	7628
3 way	9877
5 way	15926
Terminal Spring	5458



CHASSIS TOP VIEW MODEL H54MVZ



CHASSIS UNDERNEATH VIEW MODEL H54MVZ

MODEL H54MVZ — CIRCUIT CODE.

Code No.	Description	Part No.
	INDUCTORS.	
L1	Filter Unit (including C1)	9382
L2, L3	Aerial Coil 1600-540 Kc/s	7647A
L4, L5	Oscillator Coil 1600-540 Kc/s	7638A
L6, L7	1st I.F. Transformer	22700
L8, L9	2nd I.F. Transformer	22703
L10	R.F. Choke	13809
L11	R.F. Choke	3149
L12	Low Tension Filter Choke	17828B
L13	High Tension Filter Choke	8321
	RESISTORS.	
R1	0.1 megohm ½ watt	
R2	2000 ohms ½ watt	
R3	3.2 megohms 1 watt	
R4	1.6 megohms ½ watt	
R5	10,000 ohms ½ watt	
R6	0.5 megohm Volume Control (with switch)	20293
R7	10 megohms 1 watt	
R8	0.63 megohm ½ watt	
R9	3.2 megohms 1 watt	
R10	1.0 megohm ½ watt	
R11	22 ohms 1 watt	
R12	500 ohms ½ watt	
R13	12 ohms 1 watt	
R14	25 ohms 1 watt	
R15	0.1 megohm ½ watt	
R16	0.1 megohm—tone control	21917

Code No.	Description	Part No.
	CAPACITORS.	
C1	50 uuF mica	
C2	4 uuF mica	
C3	12-430 uuF tuning	18201
C4	3-25 uuF trimmer	19659
C5	0.05 uF paper 200 V working	
C6	0.05 uF paper 200 V working	
C7	3-25 uuF trimmer	19659
C8	12-430 uuF tuning	18201
C9	470 uuF ± 2½% padder	
C10	70 uuF mica	
C11	70 uuF mica	
C12	70 uuF mica	
C13	70 uuF mica	
C14	70 uuF mica	
C15	50 uuF mica	
C16	200 uuF mica	
C17	0.025 uF paper 400 V working	
C18	0.1 uF paper 200 V working	
C19	0.05 uF paper 200 V working	
C20	0.025 uF paper 400 V working	
C21	0.0025 uF paper 600 V working	
C22	20 uF 200 P.V. Electrolytic	

Code No.	Description	Part No.
C23	20 uF 200 P.V. Electrolytic	
C24	0.4 uF paper 200 V working	
C25	0.1 uF paper 200 V working	
C26	0.02 uF paper 600 V working	
C27	0.02 uF paper 600 V working	
C28	0.4 uF paper 200 V working	
C29	400 uF 12 P.V. Electrolytic	
C30	400 uF 12 P.V. Electrolytic	
C31	9 uuF mica	
C32	0.01 uF paper 600 V working	
C33	4 uuF mica	
C34	0.02 uF paper 600 V working	
	TRANSFORMERS.	
T1	Vibrator Transformer	17568
T2	Loudspeaker Transformer	XA20
	LOUDSPEAKER.	
	5 inch permanent magnet	AC50
	FUSES.	
F1	3 amp. cartridge	
	SWITCHES.	
S1	Battery switch (inc. in R6)	
S2	Dial Lamp switch	23936

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 have been 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 specialised equipment.

For all alignment operations, connect the "low" side of the signal generator to the receiver chassis and keep the generator output as low as possible to avoid A.V.C. action. Also, keep the volume control in the maximum clockwise position.

Testing Instruments.

(1) A.W.A. Junior Signal Generator, type 2R3911, or

(2) 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.

(3) A.W.A. Output Meter, type 2M8832.

ALIGNMENT TABLE.

Order	Connect "high" side of Generator to:	Tune Generator to:	Tune Receiver Dial to:	Adjust for maximum peak output
1	Aerial Section of Gang (front portion)	455 Kc/s	540 Kc/s	L9 Core
2	Aerial Section of Gang (front portion)	455 Kc/s	540 Kc/s	L8 Core
3	Aerial Section of Gang (front portion)	455 Kc/s	540 Kc/s	L7 Core
4	Aerial Section of Gang (front portion)	455 Kc/s	540 Kc/s	L6 Core
	Repeat the above adjustments until the maximum output is obtained.			
5	Aerial Terminal	600 Kc/s	600 Kc/s	L.F. Osc. Core Adj. (L5)*
6	Aerial Terminal	1500 Kc/s	1500 Kc/s	H.F. Osc. Adj. (C7)
7	Aerial Terminal	1500 Kc/s	1500 Kc/s	H.F. Aer. Adj. (C4)
	Repeat adjustments 5, 6 and 7.			

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

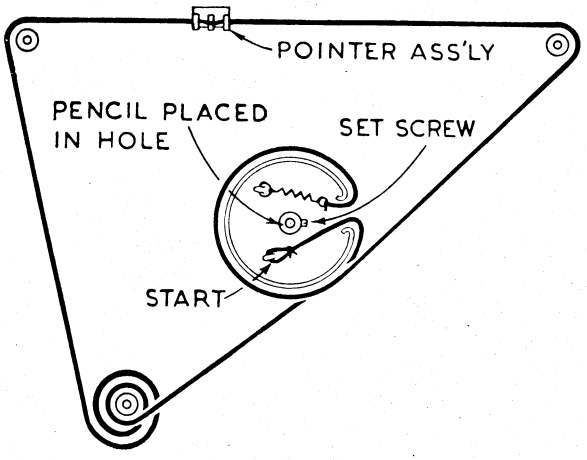
Tuning Drive Cord Replacement.

1. Remove the dial backing from the front plate.
2. Loosen the set-screws holding the drive drum to the gang spindle.
3. Remove the front plate by unscrewing three screws from the front of the plate.

Before the drive cord can be replaced, it is necessary to fasten to the drive drum some object similar to the drive spindle. A pencil will be found quite satisfactory.

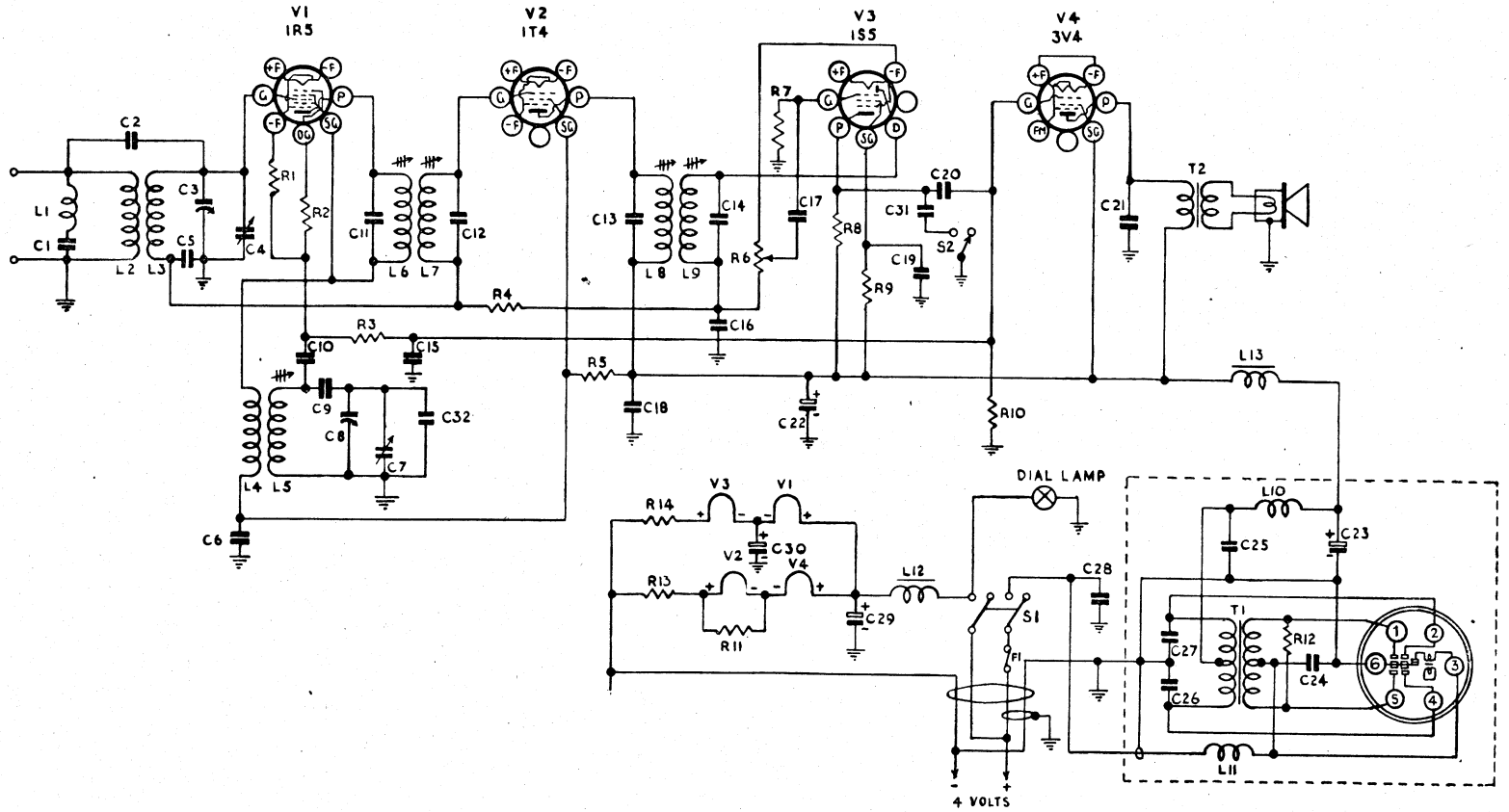
Now replace the drive cord as shown in the accompanying diagram.

To replace the front plate and drive drum, loosen the set-screws in the drum and, using the pencil as a guide, push the front plate and drive drum into position. Now re-tighten the set-screws and replace the front plate screws.



Chassis Removal.

First remove the knobs and felt washers—each knob is held by a set-screw. Then remove two screws from underneath the cabinet and withdraw the chassis.


V1
1R5
V2
1T4
V3
1S5
V4
3V4
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
C17
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C31
C32
R1
R2
R3
R4
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R7
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R9
R10
R11
R12
R13
R14
L1
L2
L3
L4
L5
L6
L7
L8
L9
L10
L11
L12
L13
T1
T2
S1
S2
DIAL LAMP
4 VOLTS