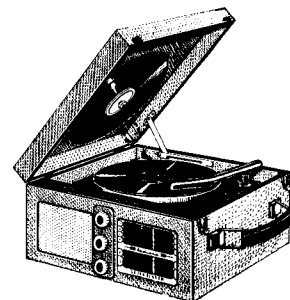


# TECHNICAL INFORMATION AND SERVICE DATA

## A.W.A. Radiola Leisuregram Model 551-GA

FIVE VALVE, BROADCAST,  
A.C. OPERATED SUPERHETERODYNE.

ISSUED BY:  
AMALGAMATED WIRELESS (AUSTRALASIA) LTD.



### ELECTRICAL SPECIFICATIONS

Frequency Range ..... 540-1600 Kc/s  
(555-187.5 Metres)  
Intermediate Frequency ..... 455 Kc/s  
Power Supply Rating ..... 200-260 volts  
50 C.P.S.

(Models are produced with other voltage and frequency ratings)

Power Consumption:  
Receiver — 40 watts  
Record Player — 15 watts

Dial Lamp:  
6.3 volt, 0.25 Amp. M.E.S.

Valve Complement:  
(1) 6BE6 Converter  
(2) 6BA6 I.F. Amplifier  
(3) 6AV6 A.F. Amplifier, Detector, A.V.C.  
(4) 6AQ5 Output  
(5) 6X4 Rectifier

Loudspeaker:  
5 inch permanent magnet, Code No. AC64  
Transformer XA2  
V.C. Impedance, 3 ohms at 400 C.P.S.

Undistorted Power Output ..... 3 watts

### GENERAL DESCRIPTION

The Radiola Leisuregram Model 551-GA is a portable Phono/Radio and features of its design include: Tropic-proof construction, automatic volume control, high permeability iron dust cores in I.F. transformers and oscillator coil, straight-line edge lighted perspex dial scale.

For the reproduction of phonograph recordings this model incorporates the A.W.A. three-speed manual player with the Ronette turnover crystal cartridge.

Controls: Tuning (top)  
Radio/Phono/Tone (centre)  
Power/Volume (bottom)

### ALIGNMENT PROCEDURE

#### Manufacturer's Setting of Adjustments.

This instrument 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.

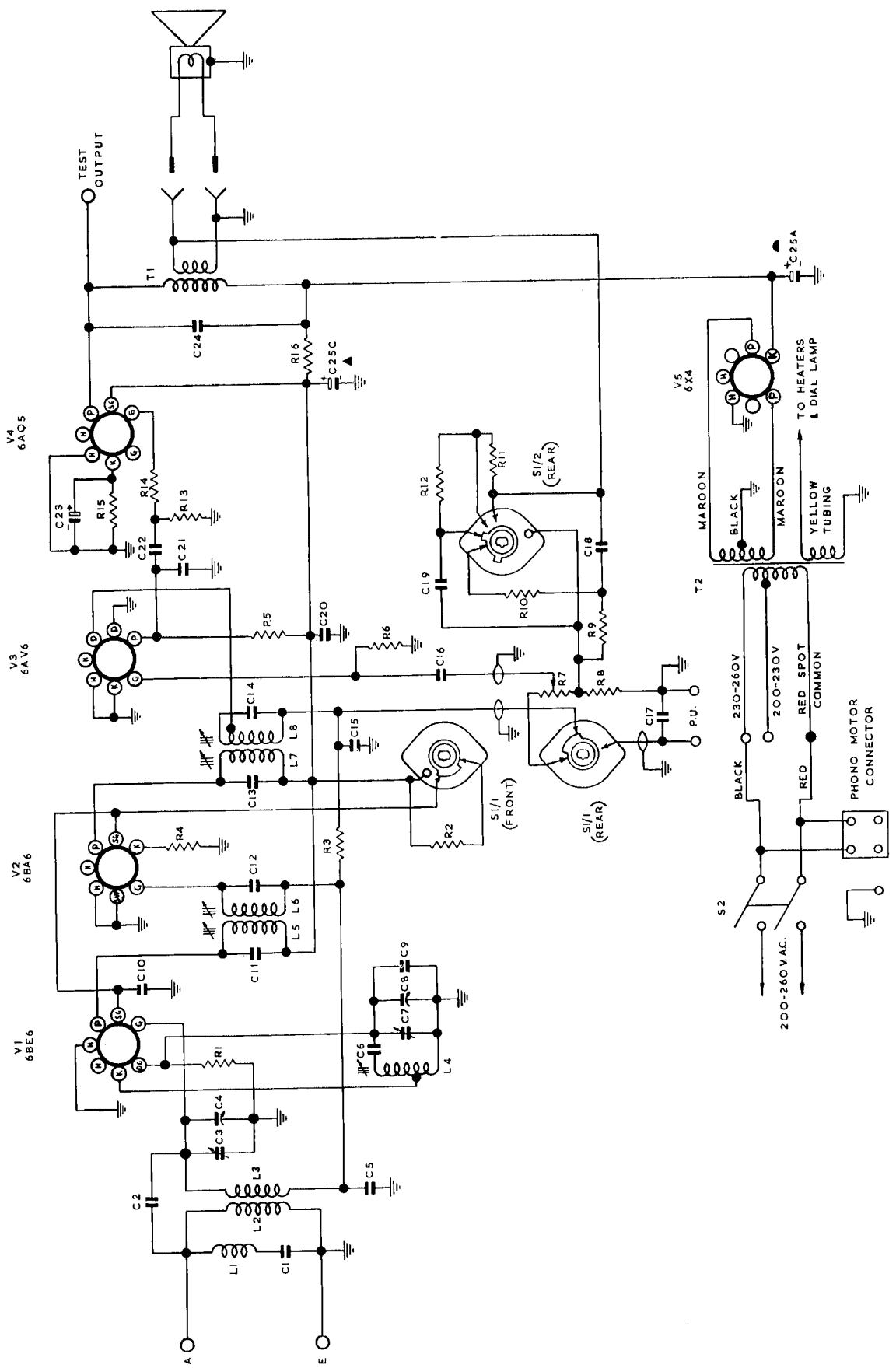
It is especially important that adjustments should not be altered unless in association with the correct testing instruments listed below.

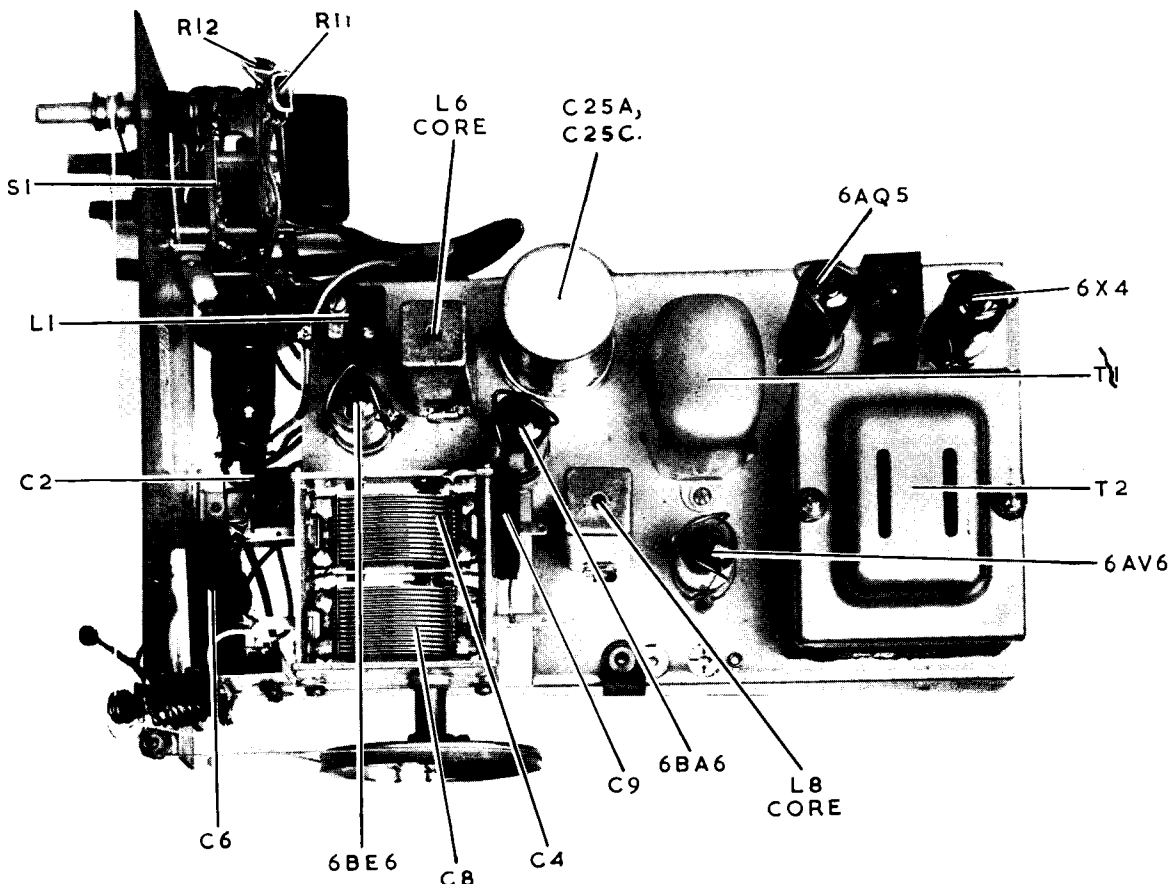
Under no circumstances should the plates of the ganged tuning capacitor be bent, as the unit is accurately aligned during manufacture and cannot be re-adjusted unless by skilled operators using special equipment.

For all alignment operations, 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.

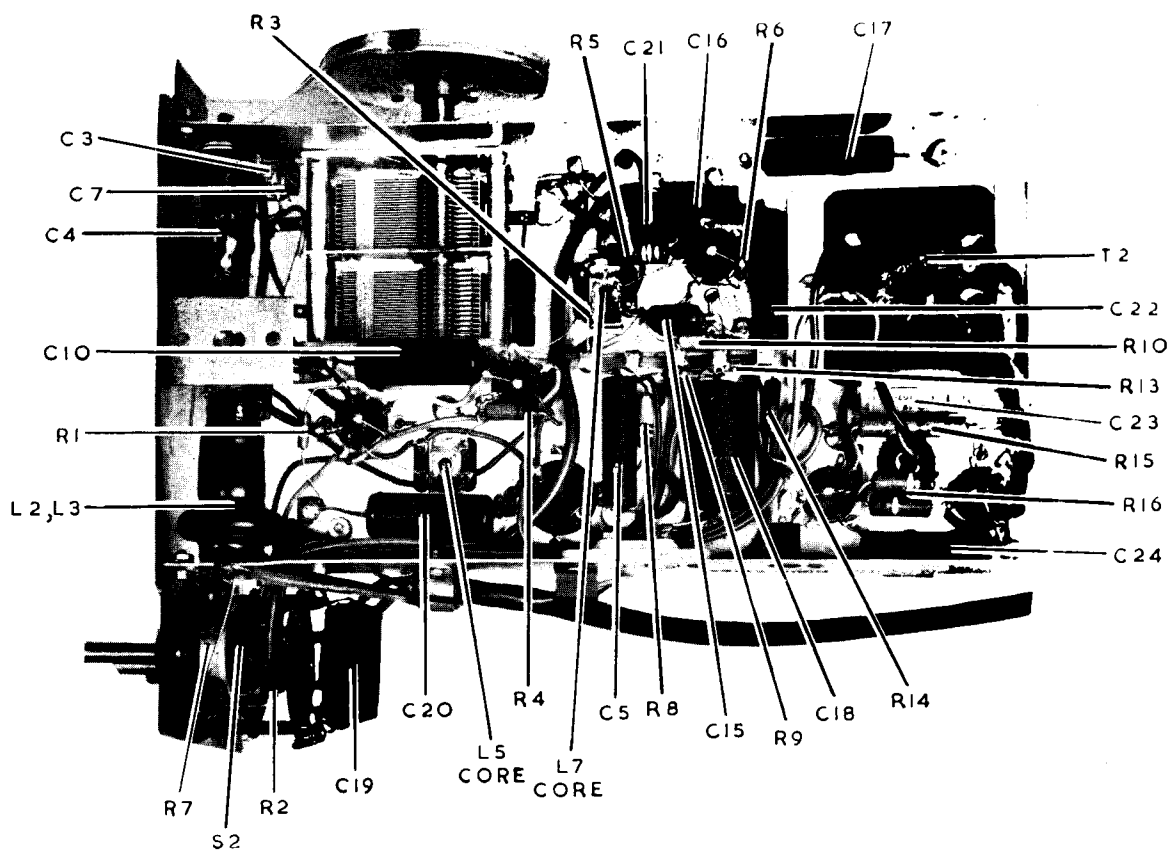
#### Testing Instruments.

- (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 of the instrument.
- (3) A.W.A. Output Meter, type 2M8832.





CHASSIS TOP VIEW, MODEL 551-GA.



CHASSIS UNDERNEATH VIEW, MODEL 551-GA.

## ALIGNMENT TABLE

Alignment Order	Connect "high" side of Generator to:	Tune Generator to:	Tune Receiver Dial to:	Adjust for Maximum Peak output:
1	Aerial Section of Gang (Rear end)	455 Kc/s	540 Kc/s	L8 Core
2	Aerial Section of Gang (Rear end)	455 Kc/s	540 Kc/s	L7 Core
3	Aerial Section of Gang (Rear end)	455 Kc/s	540 Kc/s	L6 Core
4	Aerial Section of Gang (Rear end)	455 Kc/s	540 Kc/s	L5 Core
Repeat the above adjustments until the maximum output is obtained.				
5	Aerial Lead	600 Kc/s	600 Kc/s	L.F. Ocs. Core Adj. (L4)*
6	Aerial Lead	1500 Kc/s	1500 Kc/s	H.F. Osc. Adj. (C7)
7	Aerial Lead	1500 Kc/s	1500 Kc/s	H.F. Aer. Adj. (C3)

Repeat adjustments 5, 6 and 7.

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

## SOCKET VOLTAGES

VALVES	Cathode to Chassis Volts:	Screen Grid to Chassis Volts:	Anode to Chassis Volts:	Anode Current mA:	Heater Volts:
6BE6 Converter	—	80	165	1.8	6.3
6BA6 I.F. Amp.	1.5	80	165	5.7	6.3
6AV6 A.F. Amp., Det., A.V.C.	—	—	60*	0.3	6.3
6AQ5 Output	7.0	165	250	29	6.3
6X4 Rectifier	250	—	235/235 A.C. R.M.S.	—	6.3

Total H.T. Current = 50 mA.

Measured at 240 volts A.C. supply. No signal input. Volume Control maximum clockwise. Voltmeter 1,000 ohms per volt; measurements taken on highest scale giving accurate readable deflection.

\* This reading may vary depending on the resistance of the voltmeter used.

# CIRCUIT CODE—RADIOLA 551-GA

Code No.	Description	Part No.	Code No.	Description	Part No.
<b>INDUCTORS</b>					
L1	I.F. Filter (including C1)	9382	C6	440 $\mu$ F padder $\pm$ 2 1/2%	
L2, L3	Aerial Coil 540-1,600 Kc/s	15454	C7	2-20 $\mu$ F trimmer	27526
L4	Oscillator Coil 540-1,600 Kc/s	15949	C8	12-430 $\mu$ F tuning	18674
L5, L6	1st I.F. Transformer	27351	C9	9 $\mu$ F mica	
L7, L8	2nd I.F. Transformer	27353	C10	0.05 $\mu$ F paper 400V working	
<b>RESISTORS</b>					
R1	22,000 ohms		C11	100 $\mu$ F silvered mica	
R2	10,000 ohms		C12	100 $\mu$ F silvered mica	
R3	2.7 megohms		C13	100 $\mu$ F silvered mica	
R4	220 ohms		C14	100 $\mu$ F silvered mica	
R5	0.27 megohm		C15	100 $\mu$ F mica	
R6	10 megohms		C16	0.01 $\mu$ F paper 600V working	
R7	1 megohm Volume Control (including S2)	26444	C17	0.0025 $\mu$ F paper 600V working	
R8	100 ohms		C18	0.4 $\mu$ F paper 200V working	
R9	1,000 ohms		C19	0.25 $\mu$ F paper 200V working	
R10	100 ohms		C20	0.05 $\mu$ F paper 400V working	
R11	0.1 megohm		C21	100 $\mu$ F mica	
R12	27,000 ohms		C22	0.025 $\mu$ F paper 400V working	
R13	0.47 megohms		C23	25 $\mu$ F 40 P.V. Electrolytic	
R14	47,000 ohms		C24	0.01 $\mu$ F paper 600V working	
R15	220 ohms		C25	24 $\mu$ F 350 P.V. Electrolytic	
R16	5,000 ohms		C26	24 $\mu$ F 350 P.V. Electrolytic	
<b>CAPACITORS</b>					
C1	50 $\mu$ F silvered mica		T1	Loudspeaker Transformer	XA2
C2	4 $\mu$ F mica		T2	Power Transformer, 50 C.P.S. 40 C.P.S.	25807B 25809B
C3	2-20 $\mu$ F trimmer	27526		LOUDSPEAKER	AC64
C4	12-430 $\mu$ F tuning	18674	S1	Phono-Radio-Tone Switch	31320
C5	0.05 $\mu$ F paper 200V working		S2	Power Switch (on R7)	

# D.C. RESISTANCE OF WINDINGS

Winding	D.C. Resistance in ohms
Aerial Coil:	
Primary (L2) .....	30
Secondary (L3) .....	4
Oscillator Coil (L4) .....	5
I.F. Filter (L1) .....	17.5*
I.F. Transformer Windings .....	15
Power Transformer (T2)	
Primary .....	50
Secondary .....	450
Loudspeaker Input Transformer (T1)	
Primary .....	525 or 430
Secondary .....	†

† Less than 1 ohm.

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

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

## Chassis Removal.

- (1) Remove the control knobs by pulling them straight off their spindles.
- (2) Remove six screws from the front panel and withdraw the panel.
- (3) Remove the three chassis-mounting screws from underneath the chassis and partially withdraw the chassis until the speaker and pick-up cables and phono motor power

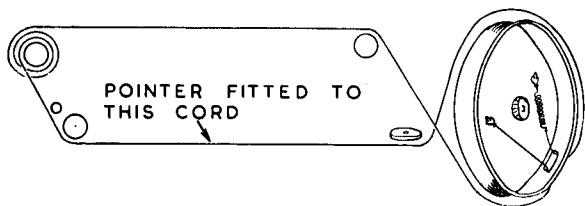
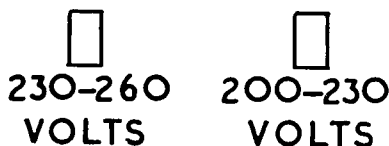
leads are accessible. Removal of these cables from the chassis enables it to be completely withdrawn.

(4) To remove the Record Player from the cabinet (which will also give access to the valves without removal of the chassis), firstly release the clamps located in the front left-hand and rear right-hand corners of the player, unscrew four screws, one in each corner of the player base. Raise the player and remove the pick-up cable and phono motor power leads from the chassis. The player may now be completely removed.

## Connection to Power Supply.

The receiver should not be connected to any circuit supplying other than alternating current from 200-260 volts and at the frequency stated on the label inside the cabinet. The power supply connections are shown in the accompanying diagram.

**RED DOT INDICATES COMMON CONNECTION FOR ALL VOLTAGES**



## Drive Cord Replacement.

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