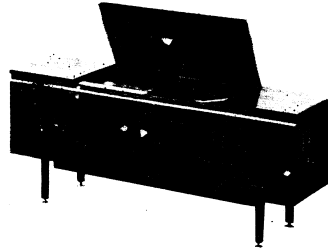


A.W.A. STEREOPHONIC RADIOLAGRAM

Model B51

ISSUED BY AMALGAMATED WIRELESS (AUSTRALASIA) LTD.



GENERAL DESCRIPTION

Model B51 is a 13 transistor, A.C. operated stereophonic radiogram designed for the reception of the Medium Wave Broadcasting Band and for the reproduction of both monophonic and stereophonic recordings. The chassis consists of a 3 transistor printed board tuner and a 10 transistor hand wired stereo amplifier. Provision has been made for plugging in a microphone, tape recorder and extension speakers.

ELECTRICAL AND MECHANICAL SPECIFICATIONS

Frequency Range	520-1,650 Kc/s
Intermediate Frequency	455 Kc/s
Power Supply Rating	220-260V A.C. 50 cps.
Power Consumption:	
Receiver	10 watts
Record Changer	20 watts
Undistorted Power Output	2 Watts per channel
Speakers (1 per channel):	
12" Low Frequency Unit (8 ohms)	53329
7" x 5" Mid Frequency Unit (15 ohms)	53345
2" High Frequency Unit (15 ohms)	52853

Dimensions:	
Height	25½"
Width	58½"
Depth	15½"
Weight	90 lbs.

Transistor and Diode Complement:

AWV 2N1639 Converter.	
AWV 2N1638 1st I.F. Amplifier.	
AWV 2N1638 2nd I.F. Amplifier.	
AWV 2N2613 1st Audio Ampl. Left-hand channel.	
AWV 2N2613 1st Audio Ampl. Right-hand channel.	
AWV 2N408 2nd Audio Ampl. Left-hand channel.	
AWV 2N408 2nd Audio Ampl. Right-hand channel.	
AWV 2N591 Driver. Left-hand channel.	
AWV 2N591 Driver. Right-hand channel.	
AWV AS128 Output	} Left-hand channel.
AWV AS128 Output	
AWV AS128 Output	} Right-hand channel.
AWV AS128 Output	
AWV IN87A Detector and A.G.C. Diode.	
AWV IN87A Overload Diode.	
AWV AS25 Rectifier.	
AWV AS25 Rectifier.	

CHASSIS REMOVAL.

Remove the cabinet back.
Disconnect the speaker, pick-up input and phono motor plugs.

Remove the changer compartment and bezel lamp holders from their brackets and pull the leads into the main chassis compartment.

The chassis assembly is secured by two screws through the rear of the chassis well. Removal of these enables the chassis to be lifted clear of the cabinet.

DIAL SCALE AND DIAL LAMP REPLACEMENT.

Remove the chassis as above.
Remove five screws securing the escutcheon and dial scale assembly to the chassis.

The dial scale is held in position by two screws.
Removal of these enables the dial scale and dial lamps to be replaced.

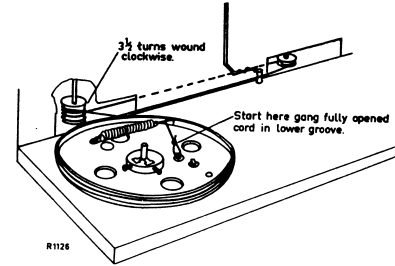
RECORD CHANGER REMOVAL.

Remove the cabinet back and disconnect the phono motor and pick-up input plugs.

Situated underneath the base board are two screws each fitted with a spring clip. Swing the clips over until they are parallel to the screws and the record changer will be free to lift from the cabinet.

DRIVE CORD REPLACEMENT.

Remove the chassis and escutcheon as above.
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 have been broken. It is especially important that the adjustments should not be altered unless the correct testing instruments, listed below, are used.

Under no circumstances should the plates of the ganged tuning capacitor be bent, as the unit is accurately aligned during manufacture and can only be re-adjusted by skilled operators using special equipment.

For all alignment operations keep the generator output as low as possible to avoid a.g.c. action and set the volume control in the maximum clockwise position.

Testing Instruments:

Signal Generator—Modulated 400 c.p.s. or Modulated Oscillator.

If the modulated oscillator is used, connect a 220K ohms non-inductive resistor across the output terminals.

Output Meter—7 ohms impedance:

In order to avoid damage to output transistors and associated circuitry when the chassis is being tested, it is necessary to provide a load on both audio amplifiers. Hence, a 7 ohms, 3 watt resistor should be connected to the output terminals of the amplifier which is not loaded with the output meter.

Set the balance control to that position which gives maximum audio output on the output meter.

ALIGNMENT TABLE

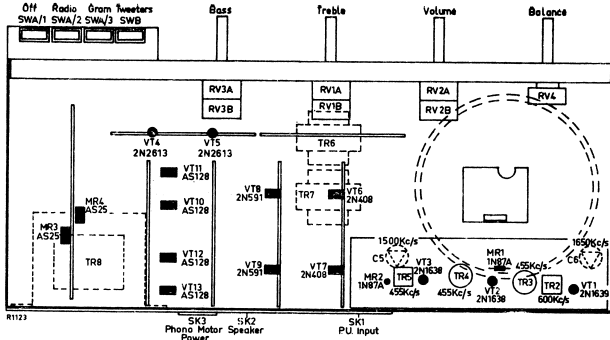
ORDER	CONNECT GENERATOR TO:	TUNE GENERATOR TO:	TUNE RECEIVER TO:	ADJUST FOR MAX. PEAK OUTPUT
1	Aerial Section of Gang	455 Kc/s	Gang fully closed	Cores in TR5, TR4 and TR3
Repeat adjustments until maximum output is obtained.				
2	Inductively coupled to Rod Aerial*	600 Kc/s	600 Kc/s	L.F. Osc. Core Adj. (TR2)†
3	Inductively coupled to Rod Aerial*	1,650 Kc/s	Gang fully opened	Osc. Trimmer (C6)
4	Inductively coupled to Rod Aerial*	1,500 Kc/s	1,500 Kc/s	Aer. Trimmer (C5)

* A coil comprising 3 turns of 16 gauge D.C.C. wire about 12 inches in diameter should be connected between the output terminals of the test instrument, placed concentric with the rod aerial and distant not less than 1 foot from it.

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

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Notes: The diagram represents the view from the wiring side of the printed board.

All voltages shown are negative with respect to the board earth (receiver chassis) and measured with no signal input and volume maximum clockwise using a 20,000 ohm/volt meter.

