

D.C. RESISTANCE OF WINDINGS

Winding	D.C. Resistance in ohms
Output Transformers T1, T2:	
Primary	380
Secondary	2
Power Transformer T3:	
Primary	52
H.T. Secondary	350
L.T. Secondary	*

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.

* Less than 1 ohm.

MECHANICAL REPLACEMENT PARTS

Item	Part Number
Chassis Assembly:	
Cover, Power Transformer	20150
Clamp Body, Power Cable	208095
Clamp Lock, Power Cable	208096
Speed Nut	21915
Socket, 7 Pin	794579
Socket, 9 Pin	794591
Cabinet Fitting:	
Back Plate, Chassis	38533
Bezel Light	37317
Bracket, Cable Storage	38537
Bracket, Pilot Lamp	35984
Cable, External Speaker	38715
Cover, Speaker	39389
Knobs	38528
Plate and Socket Assembly	38531
Shield, Pilot Light	36698

When ordering, always quote the Part Numbers and in the case of coloured parts such as cabinets, knobs, etc., the colour plus the Part Number.

SOCKET VOLTAGES

Valve	Cathode to Chassis Volts	Screen Grid to Chassis Volts	Anode to Chassis Volts	Anode Current mA	Heater Volts
12AX7	0	—	90	1	6.3
6AQ5	0	195	230	27	6.3
6X4	240	—	235/235 AC RMS	—	6.3

Voltage across back-bias resistor R20 = 11 volts.

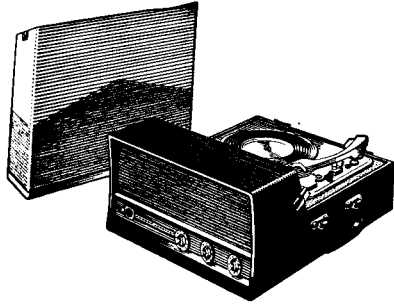
Total current drain = 60 mA.

Voltages measured with amplifier connected to 240 volts A.C. supply, with no signal input. Measurements taken on a 20,000 ohm/volt meter on highest scale giving accurate readable deflection.



SUPERVISED SERVICE

TECHNICAL INFORMATION AND SERVICE DATA



RADIOLA Stereophonic Portable Phonograph Model 194S

ISSUED BY
AMALGAMATED WIRELESS (AUSTRALASIA) LTD.

GENERAL DESCRIPTION

Model 194S is a four valve, A.C. operated, portable stereophonic phonograph, capable of reproducing all stereophonic and monophonic recordings. The dual amplifier chassis and the right hand channel speaker are mounted in the main cabinet, while the detachable lid houses the left hand channel speaker. Features of the design include: Matched amplifiers; tandem volume controls with matched elements.

ELECTRICAL AND MECHANICAL SPECIFICATIONS

Valve Complement:

Radiotron 12AX7 Two Channel Audio Amplifier.
Radiotron 6AQ5 Output.
Radiotron 6AQ5 Output.
Radiotron 6X4 Rectifier.

Loudspeakers:

In cabinet: 5" Permanent Magnet No. 21650.
In lid: 5" Permanent Magnet No. 21643.
Loudspeaker Transformers 21204G.
V/C Impedance: 15 ohms at 400 C.P.S.
Undistorted Power Output: 1.5 watts per channel.

Dimensions:

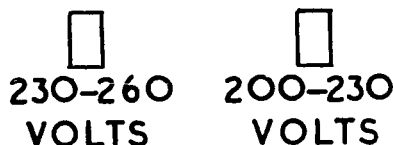
Height, 7 $\frac{1}{4}$ "; Width, 15"; Depth, 18"; Weight, 25 lbs. net.

Connection to Power Supply:

The receiver should not be connected to any circuit supplying other than 200 to 260 volts A.C. at a frequency of 50 C.P.S.

Connections for power supply on the power transformer as shown in the following diagram.

RED DOT INDICATES COMMON CONNECTION FOR ALL VOLTAGES



Chassis Removal:

Unhinge the lid from the cabinet and secure the record player firmly to the motor board with the transport screws.

Remove all the screws retaining both the perforated metal cover and the motor board. Disconnect the pick up and phono motor power leads and lift the motor board and player assembly free of the cabinet.

Disconnect both pairs of speaker leads and slide the pilot lamp holder off its support bracket. Remove the chassis back plate which is held in position by two nuts and two self tapping screws. Remove the control knobs by pulling them off their spindles.

Remove the two 4BA nuts holding the chassis to the front of the cabinet, and the chassis may be lifted free of the cabinet.

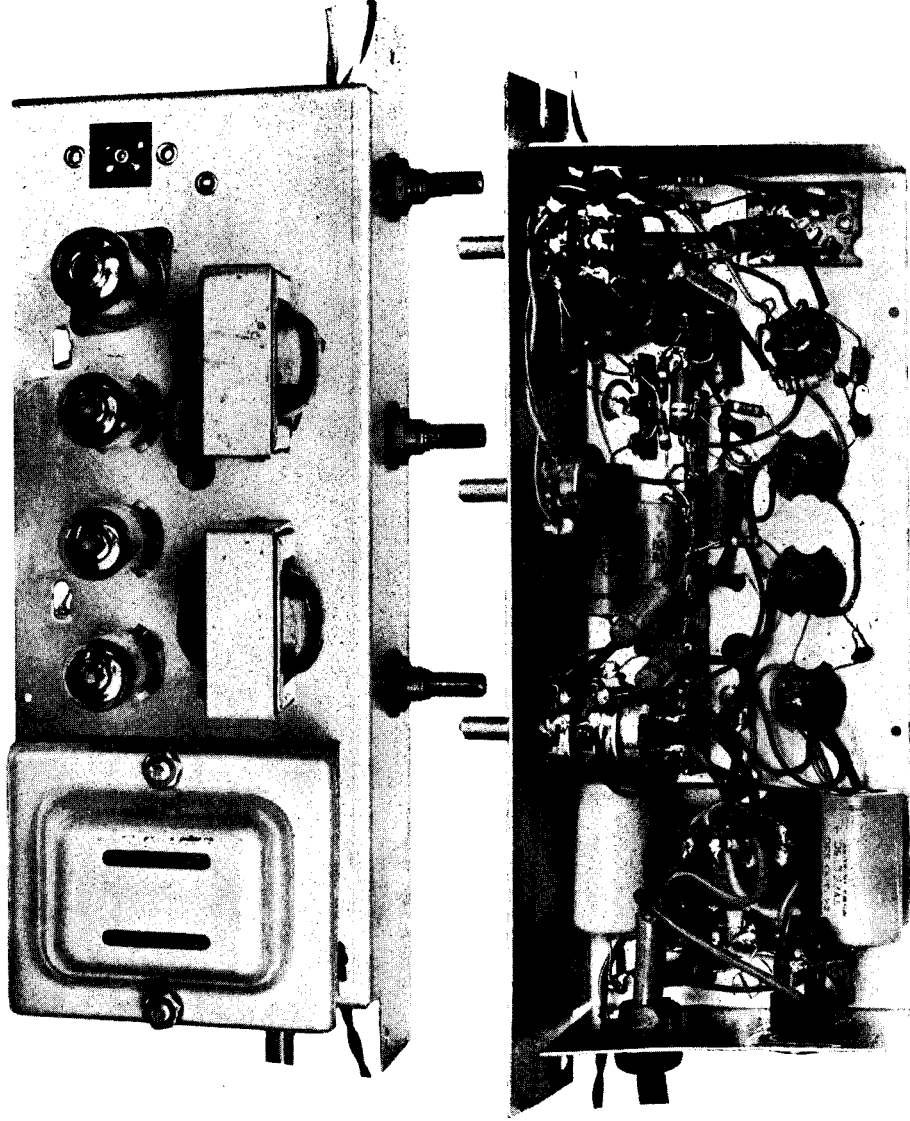
To replace the chassis, the above procedure is reversed. The correct phasing of the loudspeakers may be determined from the circuit diagram.

Note:

In order to avoid damage to output valves and associated circuitry when the chassis is being tested, it is necessary to provide A.C. loading on both amplifiers. Hence a 15 ohm 3 watts resistor should be connected to the voice coil terminals of the amplifier which is not loaded with an output meter or a speaker.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

A B C D E F G H J K L M N P Q R

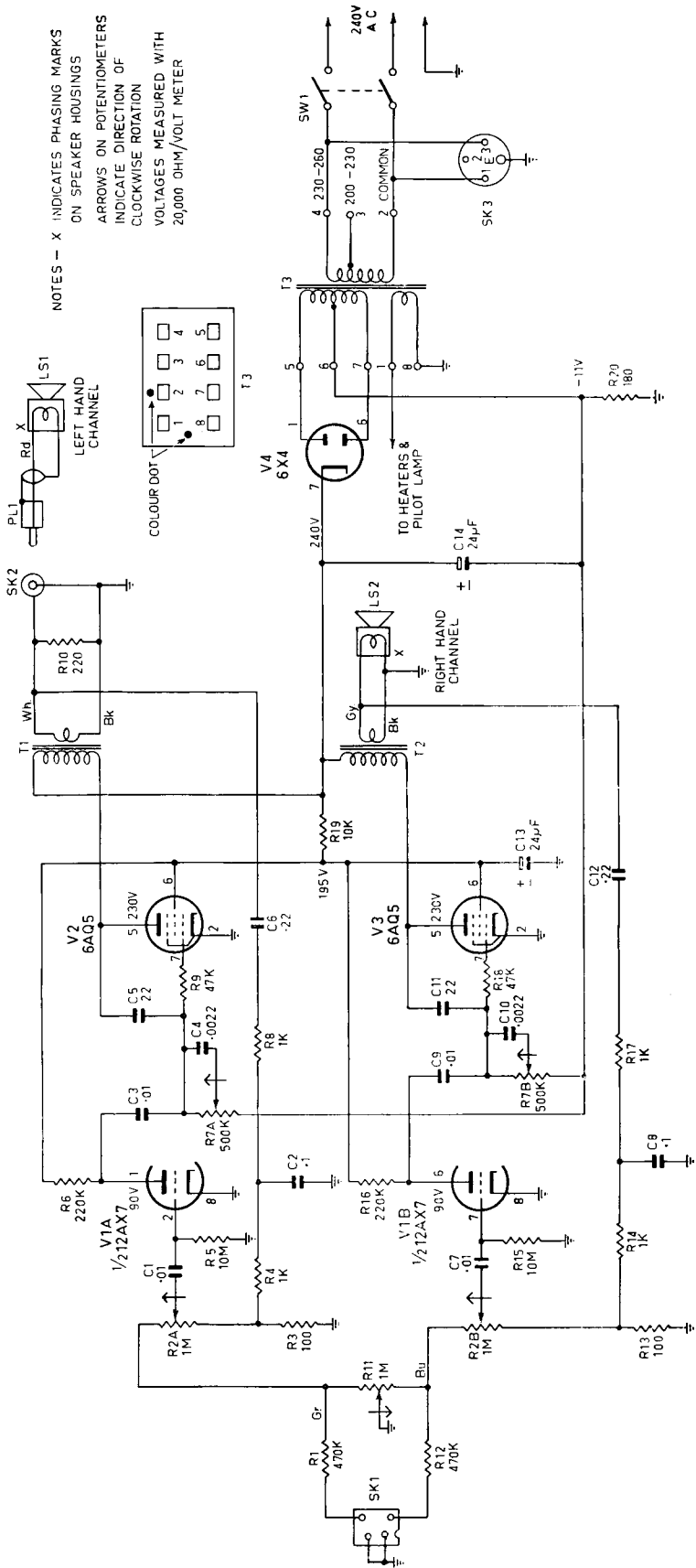


A B C D E F G H J K L M N P Q R

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

CIRCUIT CODE — RADIOLA 1945

Code No.	Description	Part No.	Location	Code No.	Description	Part No.	Location
RESISTORS							
	Resistors ± 10% Carbon unless otherwise stated			C3	0.01 μF ± 20% 400 volt working paper	226311	N14
R1	470K ohms	617356	N16	C4	0.0022 μF ± 20% 600 volt working paper	225624	M8
RA	1 Megohm Log Carbon, Volume	620944	L16	C5	22 pF ± 10% N750 Disc	220882	N12
ZB	1 Megohm Log Carbon, Volume		K15	C6	0.22 μF ± 20% 200 volt working paper	227330	L10
R3	100 ohms	604031	M15	C7	0.22 μF ± 20% 400 volt working paper	226311	N15
R4	1K ohms	608025	M14	C8	0.1 μF ± 20% 200 volt working paper	227022	L14
R5	10 Megohms	619406	Q13	C9	0.01 μF ± 20% 400 volt working paper	226311	N11
R6	220K ohms	600727	N14	C10	0.0022 μF ± 20% 600 volt working paper	225624	M9
R7A	500K ohms Log Carbon, Tone	620922	L7	C11	22 pF ± 10% N750 Disc	220882	N10
R7B	500K ohms Log Carbon, Tone		K7	C12	0.22 μF ± 20% 200 volt working paper	227330	M10
R8	1K ohms	608025	M13	C13	24 μF 350 VP Electrolytic	222812	L5
R9	47K ohms	614961	N13	C14	24 μF 350 VP Electrolytic	222812	Q5
R10	220 ohms	600667	On K11	TRANSFORMERS			
R11	1 Megohm Linear Carbon, Balance	620739	N17	T1	Output Transformer	21204G	E13
R12	470K ohms	617356	K14	T2	Output Transformer	21204G	E9
R13	100 ohms	604031	K14	T3	Power Transformer	25807	D5
R14	1K ohms	608025	P13	VALVES			
R15	10 Megohms	619406	M13	V1	Radiotron 12AX7		P14
R16	220K ohms	600727	M12	V2	Radiotron 6AQ5		P12
R17	1K ohms	608025	M10	V3	Radiotron 6AQ5		P10
R18	47K ohms	614691	M7	V4	Radiotron 6X4		P8
R19	10K ohms	600701	M3	MISCELLANEOUS			
R20	180 ohms	604911	M3	LS1	5" Permanent Magnet	21643	In Lid
CAPACITORS							
C1	0.01 μF ± 20% 400 volt working paper	226311	P16	LS2	5" Permanent Magnet	21650	C17
C2	0.1 μF ± 20% 200 volt working paper	227022	M15	SK1	4 Pin Wafer Socket	793287	
				SK2	Co-axial Socket	793249	
				SK3	4 Pin Moulded Socket	28313	
				SW1	Power Switch (on R7)		



NOTES - X INDICATES PHASING MARKS
 ON SPEAKER HOUSINGS
 ARROWS ON POTENTIOMETERS
 INDICATE DIRECTION OF
 CLOCKWISE ROTATION
 VOLTAGES MEASURED WITH
 20,000 OHM/VOLT METER

Addenda

- 1 Two 270K ohms $\pm 10\%$ $\frac{1}{2}$ watt resistors have been added, one from each end of the Balance Control to chassis.
- 2 A 470 K ohm $\pm 10\%$ $\frac{1}{2}$ watt resistor is located on the record player base plate between orange and green leads.