

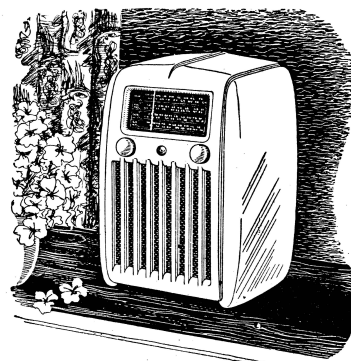
TECHNICAL INFORMATION
AND SERVICE DATA

 **RADIOLA**

Model 520-MY

**FOUR VALVE, BROADCAST, A.C. OPERATED
SUPERHETERODYNE**

ISSUED BY
AMALGAMATED WIRELESS (A/SIA) LTD.



ELECTRICAL SPECIFICATIONS.

Frequency Range 540-1600 Kc/s (555-187.5 M)
Intermediate Frequency 455 Kc/s
Power Supply Rating 200-260 volts, 50-60 C.P.S.
(Instruments available for other voltage and frequency ratings.)

Power Consumption 35 watts
Dial Lamp 6.3 volts, 0.25 amp. M.E.S.

Valve Complement:

1. 6A8G Converter
2. 6AR7GT I.F. Amplifier, Detector and A.V.C.

3. KT61 Output
4. 5Y3GT Rectifier

Undistorted Power Output 1 watt

Loudspeaker (Permanent Magnet):

5 inch—code number AC47
Transformer XA3
V.C. Impedance 3 ohms at 400 C.P.S.

Controls: Volume/Power—Left-hand knob
Tuning—Right-hand knob

MECHANICAL SPECIFICATIONS.

	Height	Width	Depth
Cabinet Dimensions (ins.)	10 $\frac{3}{4}$	7 $\frac{1}{2}$	5 $\frac{3}{4}$
Chassis Base Dimensions (ins.)	9 $\frac{1}{4}$	2 $\frac{1}{2}$	4 $\frac{1}{4}$

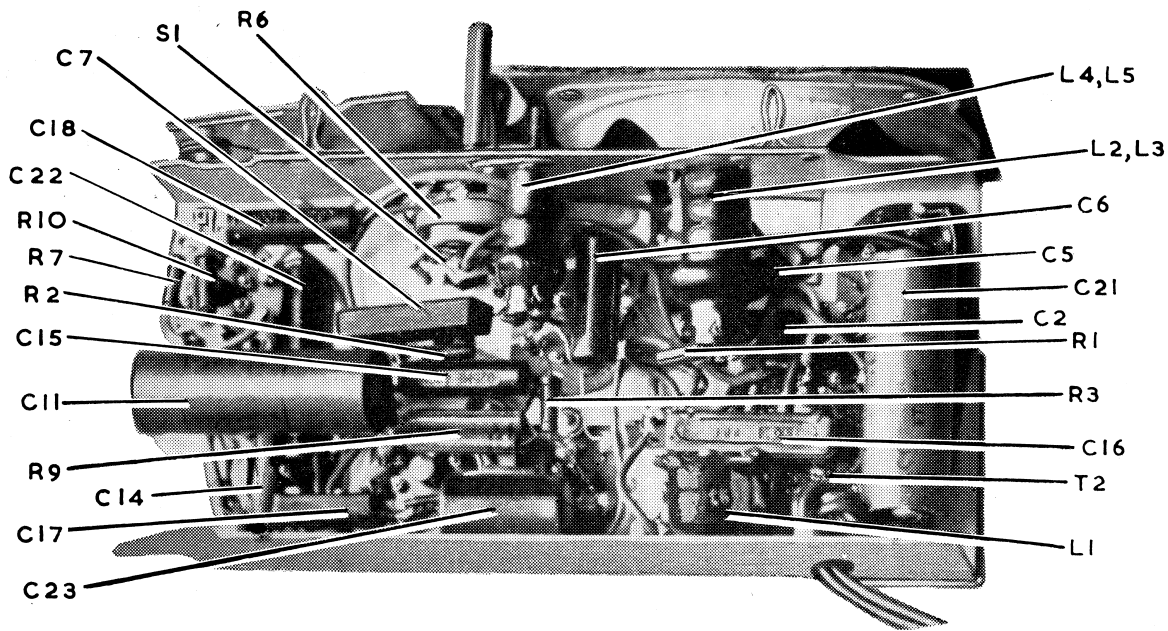
Carton Dimensions (ins.) 11 $\frac{3}{4}$ 7 $\frac{3}{4}$ 7 $\frac{3}{4}$
Weight (nett) 13 lbs.
Cabinet Colours Ivory, Walnut and Burgundy

GENERAL DESCRIPTION.

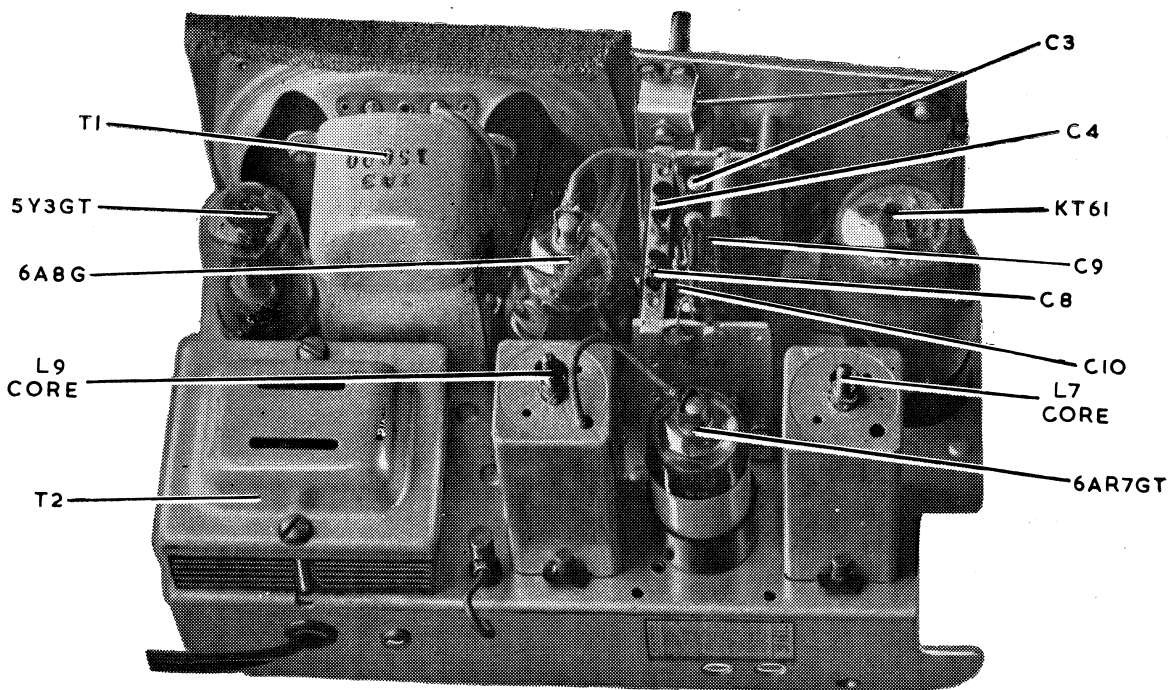
The Radiola 520-MY is a compact mantel receiver, housed in an attractively designed two-piece plastic cabinet. The back is so designed to enable the receiver to be carried with ease. The cabinet is available in three colours—Ivory,

Walnut and Burgundy.

Features of this receiver include: Tropic-proof construction, automatic volume control, magnetite cores in I.F. transformers and oscillator coil, "Capacity to Mains" aerial.



CHASSIS TOP VIEW MODEL 520-MY



CHASSIS UNDERNEATH VIEW MODEL 520-MY

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 an 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 to:	Adjust for maximum peak output
1	6A8G*	455 Kc/s	540 Kc/s	L9 Core
2	6A8G*	455 Kc/s	540 Kc/s	L8 Core
3	6A8G*	455 Kc/s	540 Kc/s	L7 Core
4	6A8G*	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. O.c. Core Adj. (L5) †
6	Aerial Terminal	1500 Kc/s	1500 Kc/s	H.F. Aer. Adj. (C4)
7	Aerial Terminal	1500 Kc/s	1500 Kc/s	H.F. Osc. Adj. (C8)
Repeat adjustments 5, 6, and 7.				

*With grid clip connected, a 0.001 uF capacitor should be connected in series with the "high" side of the test instrument.
†Rock the tuning control back and forth through the signal.

Chassis Removal.

1. Remove the control knobs by pulling them straight off their spindles.
2. Unscrew four screws on the back of the cabinet and remove the cabinet back.
3. The chassis is held in the cabinet by two screws. Removal of these enables the chassis to be withdrawn from the cabinet.

Tuning Drive Cord Replacement. (Fig.1)

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 two 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 drum into position. Now re-tighten the set-screws and replace the front plate screws.

Connection to Power Supply. (Fig.2)

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 within the cabinet.

The power supply connections are shown in the accompanying diagram.

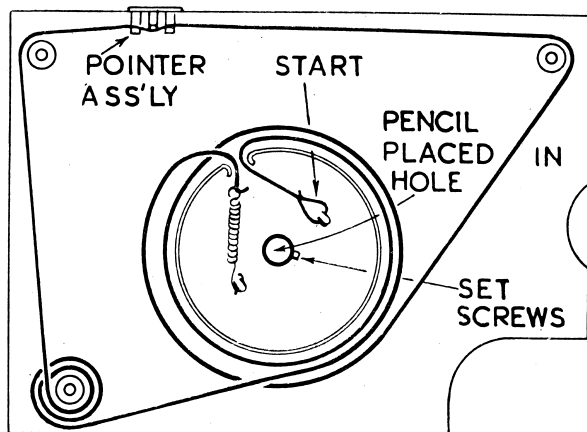


Fig. 1.

RED DOT INDICATES COMMON CONNECTION FOR ALL VOLTAGES

230-260
VOLTS

200-230
VOLTS



Fig. 2.

MODEL 520-MY — CIRCUIT CODE.

Code No.	Description	Part No.	Code No.	Description	Part No.
INDUCTORS.					
L1	I.F. Filter (including C1)	9382	C8	2-20 uF trimmer (on gang)	
L2, L3	Aerial Coil 540-1600 Kc/s	7647A	C9	12 uF mica	
L4, L5	Oscillator Coil 540-1600 Kc/s	7638A	C10	12-430 uF tuning	18620
L6, L7	1st I.F. Transformer	22709	C11	24 uF 350 P.V. Electrolytic	
L8, L9	2nd I.F. Transformer	22703	C12	70 uF silvered mica	
RESISTORS.					
R1	0.1 megohm $\frac{1}{2}$ watt		C13	70 uF silvered mica	
R2	50,000 ohms $\frac{1}{2}$ watt		C14	4 uF mica	
R3	10,000 ohms $\frac{1}{2}$ watt		C15	0.025 uF paper 400 V working	
R4	2.5 megohms $\frac{1}{2}$ watt		C16	500X mica (2000 V test)	
R5	1 megohm $\frac{1}{2}$ watt		C17	200 uF mica	
R6	0.5 megohm Volume Control (with switch)	25503	C18	0.025 uF paper 400 V working	
R7	0.5 megohm $\frac{1}{2}$ watt		C19	70 uF silvered mica	
R8	75 ohms $\frac{1}{2}$ watt		C20	70 uF silvered mica	
R9	12,500 ohms 2 watts		C21	24 uF 350 P.V. Electrolytic	
R10	50,000 ohms $\frac{1}{2}$ watt		C22	0.01 uF paper 600 V working	
CAPACITORS.					
C1	50 uF silvered mica		C23	0.1 uF paper 400 V working	
C2	4 uF mica		TRANSFORMERS.		
C3	12-430 uF tuning	18620	T1	Loudspeaker Transformer	XA3
C4	2-20 uF trimmer (on gang)		T2	Power Transformer 50-60 C.P.S.	17871B
C5	0.05 uF paper 200 V working		T2	Power Transformer 40-60 C.P.S.	17873B
C6	0.05 uF paper 400 V working		LOUDSPEAKER.		
C7	420 uF padder $\pm 2\frac{1}{2}\%$		S1	Power Switch (on R6)	
SWITCHES.					
				5 inch permanent magnet.....	AC47

SOCKET VOLTAGES. MODEL 520-MY.

Valves	Cathode to Chassis Volts	Screen Grid to Chassis Volts	Anode to Chassis Volts	Anode Current mA	Bias Volts	Volts Heater
6A8G Converter	0	100	215	3.5	-2.5	6.3
Oscillator	—	—	170	4.0	—	—
6AR7GT I.F. Amp., Det., A.V.C.	0	100	215	8.0	-2.5	6.3
KT6I Output	0	100	210	10.0	-2.5	6.3
5Y3GT Rectifier	215	—	190 A.C.	—	—	5.0

Total H.T. Current—32 mA.

Measured at 240 volts A.C. supply. No signal input.

Volume Control maximum clockwise. Voltmeter 1000 ohms per volt, measurements taken on highest scale giving accurate readable deflection.

D.C. RESISTANCE OF WINDINGS.

Winding	D.C. Resistance in Ohms
Aerial Coil	
Primary (L2)	30
Secondary (L3)	4
Oscillator Coil	
Primary (L4)	1.5
Secondary (L5)	6
I.F. Filter (L1)	17.5*
I.F. Transformer Windings	10
Loudspeaker Input Transformer (T1)	
Primary	550 or 670
Secondary	†
Power Transformer (T2)	
Primary	60
Secondary	350

* 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.	Item	Part No.
Cabinet, Body	23232	N.S.W.	23368A
Back	24202	Vic./Tas.	23370A
Cable, Power	15940	Q'ld.	23372A
Clip, Grid	7459	S.A./W.A.	23356A
Dial, Clip	24221	Knob	23266
Plate Assembly	24217	Socket, Valve	4707
Pointer Assembly	24222	Strip Tag, 1 way	7628
Scale, Standard	23366A	Terminal, Spring	5458

