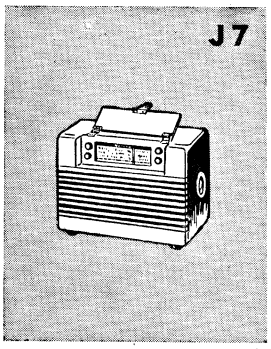


Hotpoint
BAND-MASTER
Radio Receivers

Portable Model
J75MA
Five Valves
Broadcast

Portable Model
J75DA
Five Valves
Two Band

SERVICE DATA & TECHNICAL INFORMATION

AUSTRALIAN
GENERAL ELECTRIC
PROPRIETARY LIMITED

Battery Operated **Superheterodyne**

ELECTRICAL SPECIFICATIONS.

FREQUENCY RANGES:
Model J75MA, Medium Wave ..... 540-1600 Kc/s (555-187.5 M.)
Model J75DA, Medium Wave ..... 540-1600 Kc/s (555-187.5 M.)
Short Wave ..... 6-18 Mc/s (50-16 M.)

INTERMEDIATE FREQUENCY ..... 455 Kc/s

BATTERY COMPLEMENT:
1 — 1.5 volts portable "A" Battery.
2 — 45 volts Mini-max dry cell "B" Battery.

BATTERY CONSUMPTION:
"A" Battery — 300 mA.
"B" Battery — "Maximum" — 14 mA.
"Medium" — 8 mA.

LOUDSPEAKER (Permanent Magnet):
6 inch — Code AG23.
Transformer — XA8.
V.C. Impedance — 3 ohms at 400 c.p.s.

UNDISTORTED POWER OUTPUT ..... 200 milliwatts (Bty. Switch at Maximum)

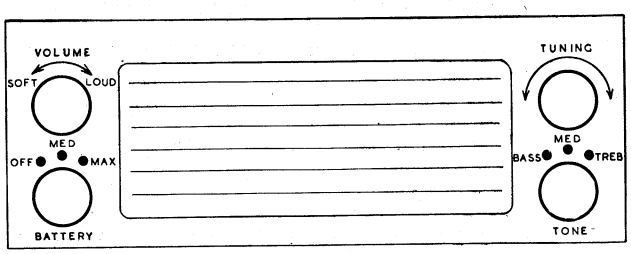
VALVE COMPLEMENT:
(1) 1T4 R.F. Amplifier.
(2) 1R5 Converter.
(3) 1T4 I.F. Amplifier.
(4) 1S5 Detector, A.F. Amplifier, A.V.C
(5) 3V4 Output.

MECHANICAL SPECIFICATIONS.

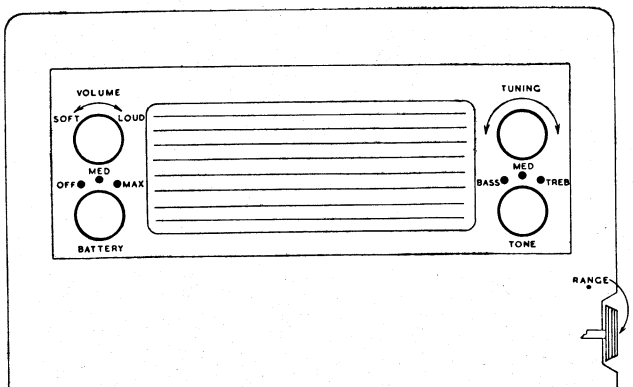
	Height.	Width.	Depth.
Cabinet Dimensions (inches)	11¾	15	6½
Carton Dimensions (inches)	14¾	16⅛	7⅜
Chassis Base Dimensions (inches)	2½	11⅜	4½

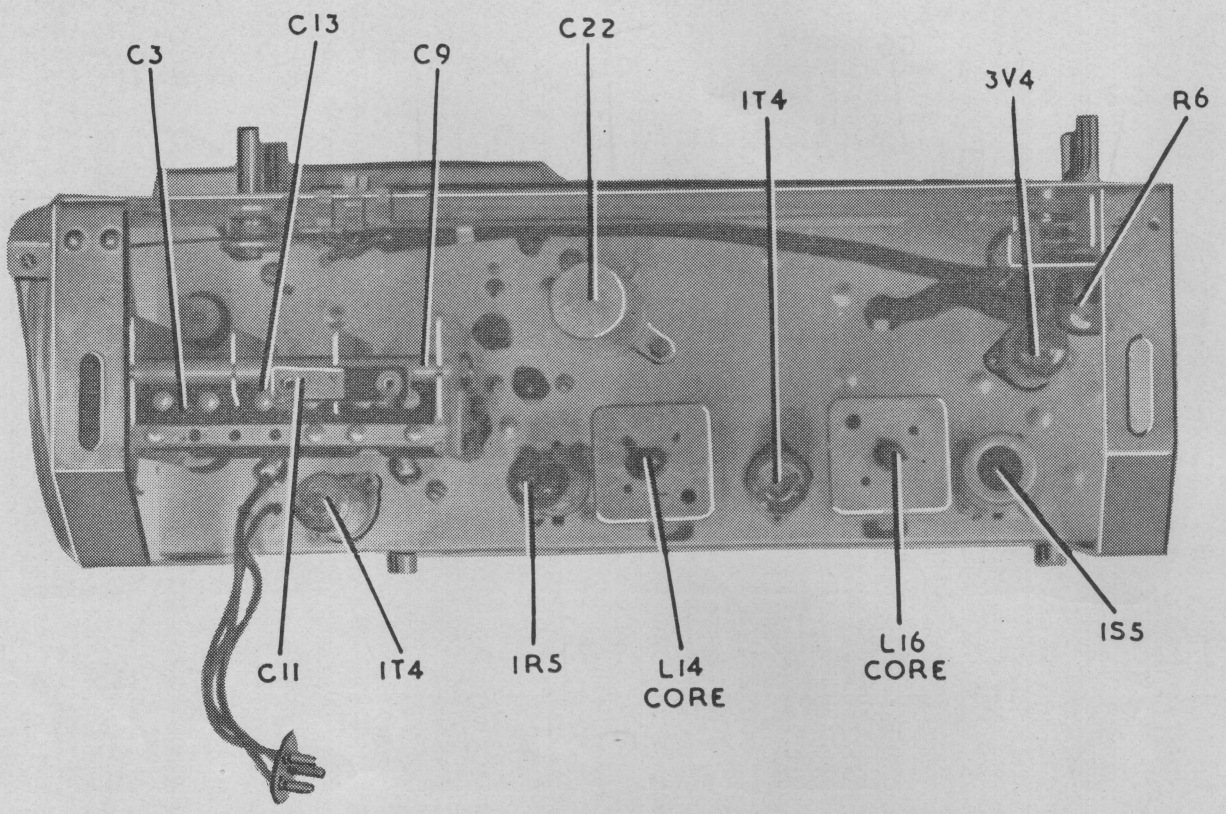
Weight (nett lbs.) ..... 19 lbs., complete with Batteries

Controls J75MA.

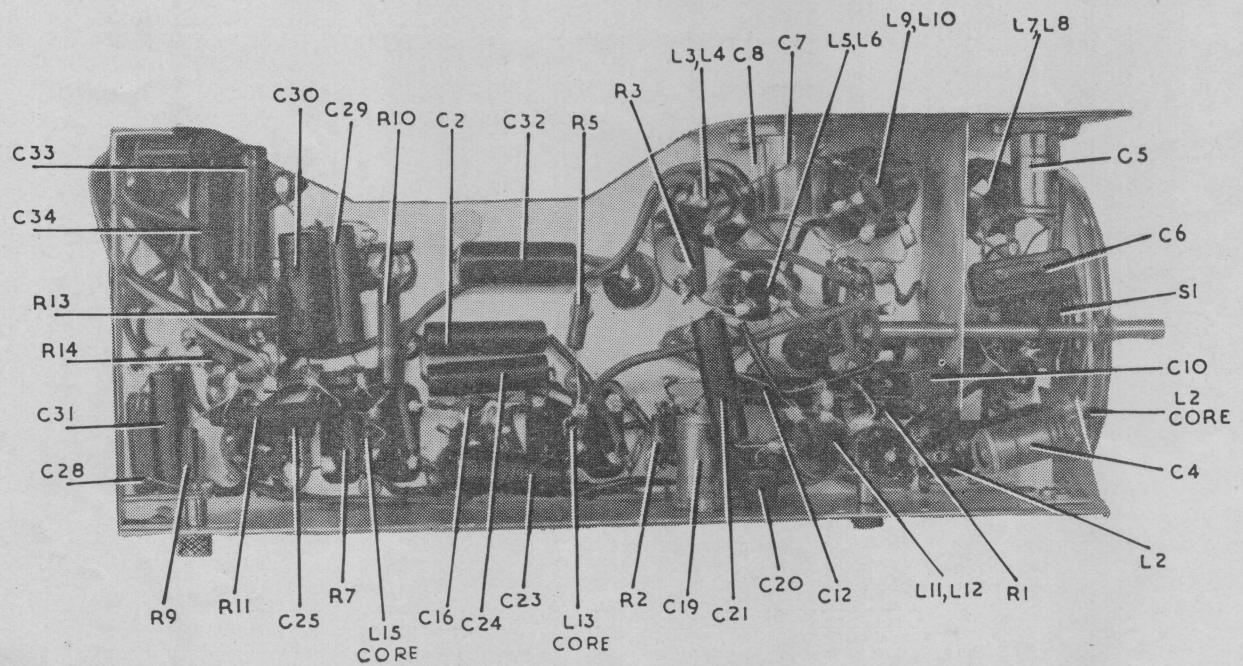


Controls J75DA.





CHASSIS [Top View] — Model J75DA



CHASSIS [Underneath View] — Model J75DA

GENERAL DESCRIPTION.

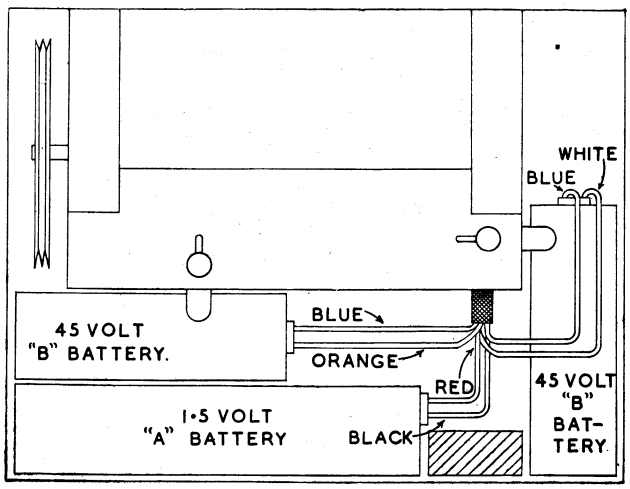
The portable models J75MA are broadcast and the models J75DA, two-band receivers housed in cabinets attractively finished in leatherette. They embody a hinged front cover which effectively protects the dial and controls from damage, dust and weather.

Features of their design include: Tropic-proof construction, automatic volume control, magnetite cores in I.F. transformers, broadcast oscillator coils and loop coupling coils, air-dielectric trimming capacitors, straight-line tuning dial.

DRIVE CORD REPLACEMENT.

Follow the diagram which is affixed to the back of the front plate assembly. This shows the route of the cord and the method of attachment.

Battery Connections



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, except aerial stage, 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.

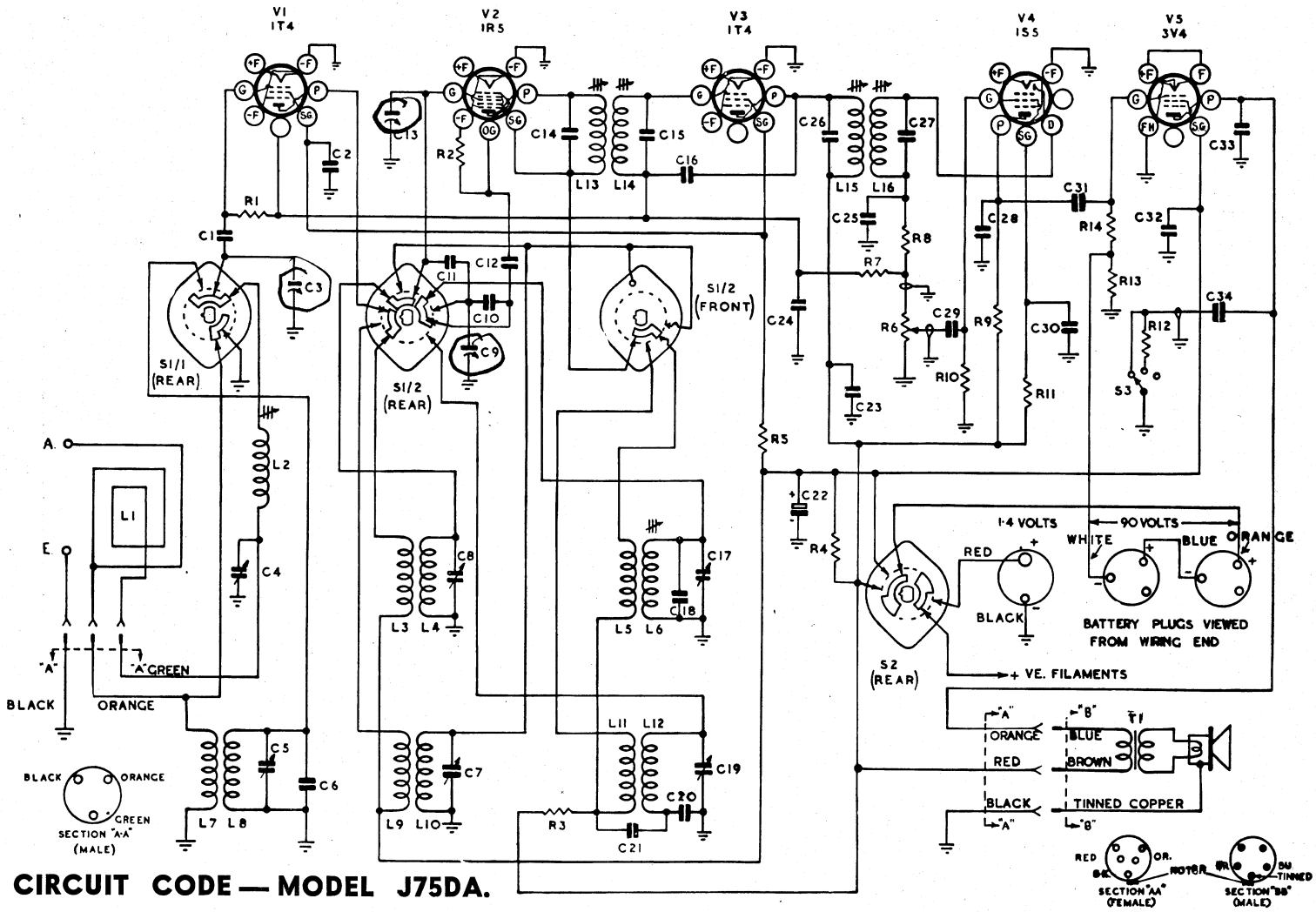
TESTING INSTRUMENTS.

(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, and, for short wave alignment, an additional 400 ohms non-inductive resistor in series with the "high" output lead of the instrument.
(3) A.W.A. Output Meter, type 2M8832.

ALIGNMENT TABLE — MODEL J75MA.

Order	Connect "high" side of generator to:	Tune generator to:	Tune receiver to:†	Adjust for maximum peak output
1	Aerial Section of Gang (Drive end)	455 Kc/s	540 Kc/s	L9 Core
2	Aerial Section of Gang (Drive end)	455 Kc/s	540 Kc/s	L8 Core
3	Aerial Section of Gang (Drive end)	455 Kc/s	540 Kc/s	L7 Core
4	Aerial Section of Gang (Drive end)	455 Kc/s	540 Kc/s	L6 Core
	Repeat the above adjustments until the maximum output is obtained.			
5	Aerial Section of Gang (Drive end)	540 Kc/s	540 Kc/s	L.F. Osc. Core Adj. (L4)
6	Aerial Section of Gang (Drive end)	1500 Kc/s	1500 Kc/s	H.F. Osc. Adj. (C9)
	The chassis should now be fitted into the cabinet and the aerial plug connected to the aerial socket.			
7	*Inductively coupled to loop	600 Kc/s	600 Kc/s	L.F. Aer. Core Adj. (L2)‡
8	*Inductively coupled to loop	1500 Kc/s	1500 Kc/s	H.F. Aer. Adj. (C1)‡

* A coil comprising 3 turns of 16 gauge D.C.C. wire and about 6 inches in diameter should be connected between the output terminals of the test instrument and placed co-axial with the loop and distant not less than 1 foot from it.
† Before removing the chassis from the cabinet, mark the alignment points on the back of the front plate assembly.
‡ This adjustment is accessible through a hole in the right-hand end of the cabinet after removing the cover from the hole.



CIRCUIT CODE — MODEL J75DA.

Code No.	Description	Part No.
	INDUCTORS	
L1	Aerial Coil Loop	22430
L2	Loop Coupling Coil	22718
L3, L4	R.F. Coil, 1600-540 Kc/s	23891
L5, L6	Oscillator Coil, 1600-540 Kc/s	9206A
L7, L8	Aerial Coil, 6-18 Mc/s	15456
L9, L10	R.F. Coil, 6-18 Mc/s	23892
L11, L12	Oscillator Coil, 6-18 Mc/s	15922
L13, L14	1st I.F. Transformer	22700
L15, L16	2nd I.F. Transformer	22703
	RESISTORS	
R1	1 megohm ½ watt	
R2	0.1 megohm ½ "	
R3	10,000 ohms ½ "	
R4	10,000 ohms ½ "	
R5	50,000 ohms ½ "	
R6	0.5 megohm Volume Control	23275
R7	2.5 megohms ½ watt	
R8	20,000 ohms ½ "	
R9	0.63 megohm ½ "	
R10	10 megohms 1 "	
R11	3.2 megohms 1 "	
R12	10,000 ohms ½ "	
R13	400 ohms ½ "	
R14	1 megohm ½ "	
	CAPACITORS	
C1	200 μμF Mica	
C2	0.05 μF Paper, 200v. working	
C3	12-430 μμF Tuning	18639
C4	3-25 μμF Air Trimmer	19659
C5	3-25 μμF Air Trimmer	19659
C6	9 μμF Mica	
C7	3-25 μμF Air Trimmer	19659
C8	3-25 μμF Air Trimmer	19659
C9	12-430 μμF Tuning	18639
C10	470 μμF ± 2½% Padder	
C11	Neutralising	
C12	70 μμF Mica	
C13	12-430 μμF Tuning	18639
C14	70 μμF Mica	
C15	70 μμF Mica	
C16	9 μμF Mica	
C17	3-25 μμF Air Trimmer	19659
C18	9 μμF Mica	
C19	3-25 μμF Air Trimmer	19659
C20	4000 μμF ± 2½% Padder	
C21	0.05 μF Paper, 200v. working	
C22	20 μF 200, P.V. Electrolytic	
C23	0.1 μF Paper, 200v. working	
C24	0.01 μF Paper, 600v. working	
C25	100 μμF Mica	
C26	70 μμF Mica	
C27	70 μμF Mica	
C28	200 μμF Mica	
C29	0.025 μF Paper, 400v. working	
C30	0.1 μF Paper. 200v. working	
C31	0.025 μF Paper, 400v. working	
C32	0.1 μF Paper, 200v. working	
C33	0.005 μF Paper, 600v. working	
C34	0.025 μF Paper, 400v. working	
	TRANSFORMER	
T1	Loudspeaker Transformer	XA8
	LOUDSPEAKER	
	6 inch Permanent Magnet	AG23
	SWITCHES	
S1	Range Switch	23251
S2	Battery ON/OFF Switch	23252
S3	Tone Switch	23260

ALIGNMENT TABLE — MODEL J75DA.

Order	Connect "high" side of generator to:	Tune generator to:	Tune receiver to:†	Adjust for maximum peak output
1	Centre Section of Gang	455 Kc/s	540 Kc/s	L16 Core
2	Centre Section of Gang	455 Kc/s	540 Kc/s	L15 Core
3	Centre Section of Gang	455 Kc/s	540 Kc/s	L14 Core
4	Centre Section of Gang	455 Kc/s	540 Kc/s	L13 Core
	Repeat the above adjustments until the maximum output is obtained.			
5	Orange Lead on Aerial Plug	16 Mc/s	16 Mc/s	Osc. Adj. (C19)
6	Orange Lead on Aerial Plug	16 Mc/s	16 Mc/s	R.F. Adj. (C7)
7	Orange Lead on Aerial Plug	16 Mc/s	16 Mc/s	Aer. Adj. (C5)
8	Aerial Section of Gang	600 Kc/s	600 Kc/s	Osc. Core Adj. (L6)
9	Aerial Section of Gang	1500 Kc/s	1500 Kc/s	Osc. Adj. (C17)
10	Aerial Section of Gang	1500 Kc/s	1500 Kc/s	R.F. Adj. (C8)
	The chassis should now be fitted into the cabinet and the aerial plug connected to the aerial socket.			
11	*Inductively coupled to loop	600 Kc/s	600 Kc/s	Aer. Core Adj. (L2)‡
12	*Inductively coupled to loop	1500 Kc/s	1500 Kc/s	Aer. Adj. (C4)‡

* A coil comprising 3 turns of 16 gauge D.C.C. wire and about 6 inches in diameter should be connected between the output terminals of the test instrument and placed co-axial with the loop and distant not less than 1 foot from it.
† Before removing the chassis from the cabinet, mark the alignment points on the back of the front plate assembly.
‡ This adjustment is accessible through a hole in the right-hand end of the cabinet after removing the cover from the hole.

MECHANICAL REPLACEMENT PARTS.

Item	Part No.
Aerial, plug assembly (J75MA)	23894
Aerial, plug assembly (J75DA)	23893
Cabinet	J7
Cabinet, back assembly	23278
Cabinet, grille	23233
Cable, battery	23902
Cable, speaker	23903
Cable, tone	23904
Cable, volume	23905
Dial, clamp	23263
Dial, frame assembly	23236

Item	Part No.
Dial, pointer assembly	23276
Dial, scale Model J75MA	23335
Model J75DA	23337
Drive, cord assembly	9576M
Knob	23266
Socket, valve	19965
Socket, valve cushion	23274
Socket, valve cushion (J75DA only)	23273
Strip, tag 1 way	22945
1 way	21761
1 way (J75MA only)	7628
4 way	8022

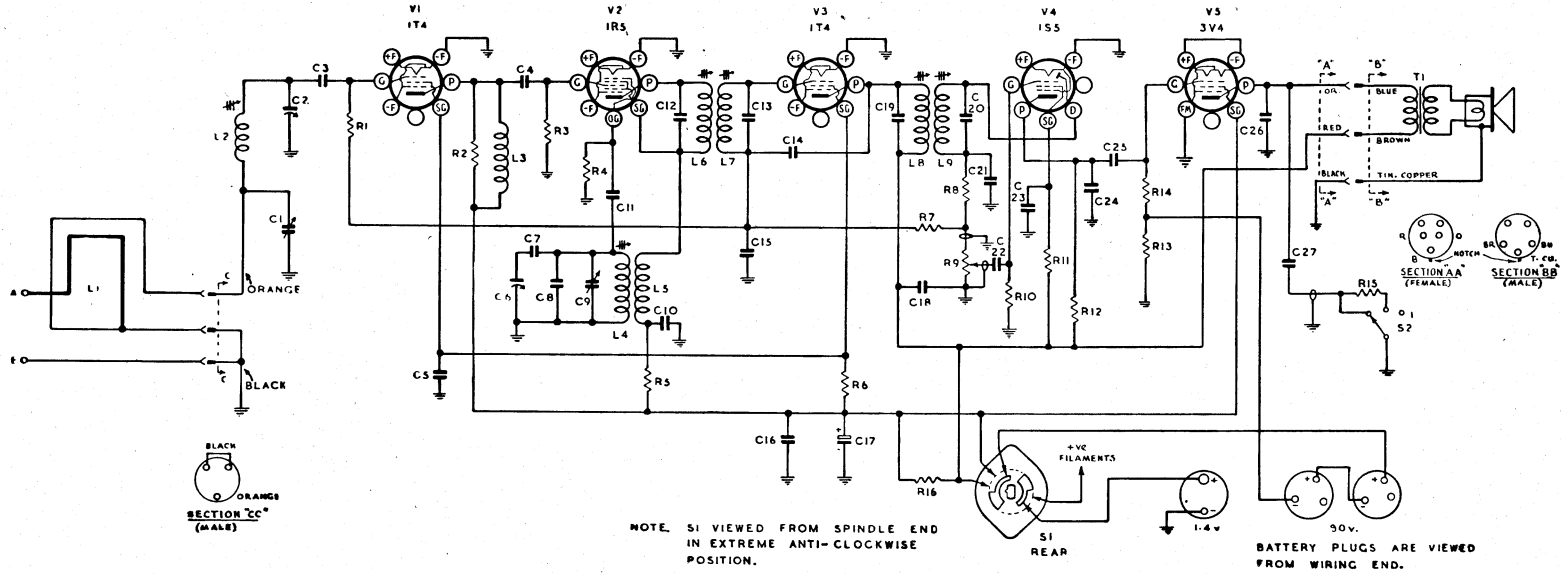
D.C. RESISTANCE OF WINDINGS.

Model J75MA.

Winding	D.C. Resistance in ohms.
Loop Coupling Coil (L2)	1.5
Compensating Coil (L3)	40
Oscillator Coil—	
Primary (L4)	2
Secondary (L5)	6
I.F. Transformer Windings	10
Loudspeaker Input	
Transformer (T1)—	
XA8 Primary	425 or 510
Secondary	*

* 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.



CIRCUIT CODE — MODEL J75MA.

Code No.	Description	Part No.
	INDUCTORS	
L1	Aerial Coil Loop	22430
L2	Loop Coupling Coil	22718
L3	Compensating Coil (includes R2)	22720
L4, L5	Oscillator Coil 540-1600 Kc/s	9206A
L6, L7	1st I.F. Transformer	22700
L8, L9	2nd I.F. Transformer	22703
	RESISTORS	
R1	1 megohm ½ watt	
R2	10,000 ohms 1 "	
R3	0.5 megohm ½ "	
R4	0.1 megohm ½ "	
R5	10,000 ohms ½ "	
R6	50,000 ohms ½ "	
R7	2.5 megohms ½ "	
R8	20,000 ohms ½ "	
R9	0.5 megohm Volume Control	23275
R10	10 megohms 1 watt	
R11	3.2 megohms 1 "	
R12	0.63 megohm ½ "	
R13	400 ohms ½ "	
R14	1 megohm ½ "	
R15	10,000 ohms ½ "	
R16	10,000 ohms ½ "	
	CAPACITORS	
C1	3-25 $\mu\mu$F Air Trimmer	19659
C2	12-430 $\mu\mu$F Tuning	18629
C3	200 $\mu\mu$F Mica	
C4	100 $\mu\mu$F Mica	
C5	0.05 μF Paper, 200v. working	
C6	12-430 $\mu\mu$F Tuning	18629
C7	490 $\mu\mu$F $\pm$ 2½% Padder	
C8	9 $\mu\mu$F Mica	
C9	3-25 $\mu\mu$F Air Trimmer	19659
C10	0.05 μF Paper, 200v. working	
C11	70 $\mu\mu$F Mica	
C12	70 $\mu\mu$F Mica	
C13	70 $\mu\mu$F Mica	
C14	9 $\mu\mu$F Mica	
C15	0.01 μF Paper, 600v. working	
C16	0.1 μF Paper, 200v. working	
C17	20 μF 200, P.V. Electrolytic	
C18	0.1 μF Paper, 200v. working	
C19	70 $\mu\mu$F Mica	
C20	70 $\mu\mu$F Mica	
C21	100 $\mu\mu$F Mica	
C22	0.025 μF Paper, 400v. working	
C23	0.1 μF Paper, 200v. working	
C24	200 $\mu\mu$F Mica	
C25	0.025 μF Paper, 400v. working	
C26	0.005 μF Paper, 600v. working	
C27	0.025 μF Paper, 400v. working	
	TRANSFORMERS	
T1	Loudspeaker Transformer	XA8
	SWITCHES	
S1	ON/OFF Switch	23252
S2	Tone Switch	23260
	LOUDSPEAKER	
	6 inch Permanent Magnet	AG23

Model J75DA.

Winding	D.C. Resistance in ohms.
Loop Coupling Coil (L2)	1.5
R.F. Coil (M.W.)—	
Primary (L3)	80
Secondary (L4)	4
R.F. Coil (S.W.)—	
Primary (L9)	10
Secondary (L10)	*
Aerial Coil (S.W.)—	
Primary (L7)	4
Secondary (L8)	*
Oscillator Coil (M.W.)—	
Primary (L5)	2
Secondary (L6)	6
Oscillator Coil (S.W.)—	
Primary (L11)	*
Secondary (L12)	*
I.F. Transformer Windings	10
Loudspeaker Input Transformer (T1)—	
XA8 Primary	425 or 510
Secondary	*

* 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.

SOCKET VOLTAGES.

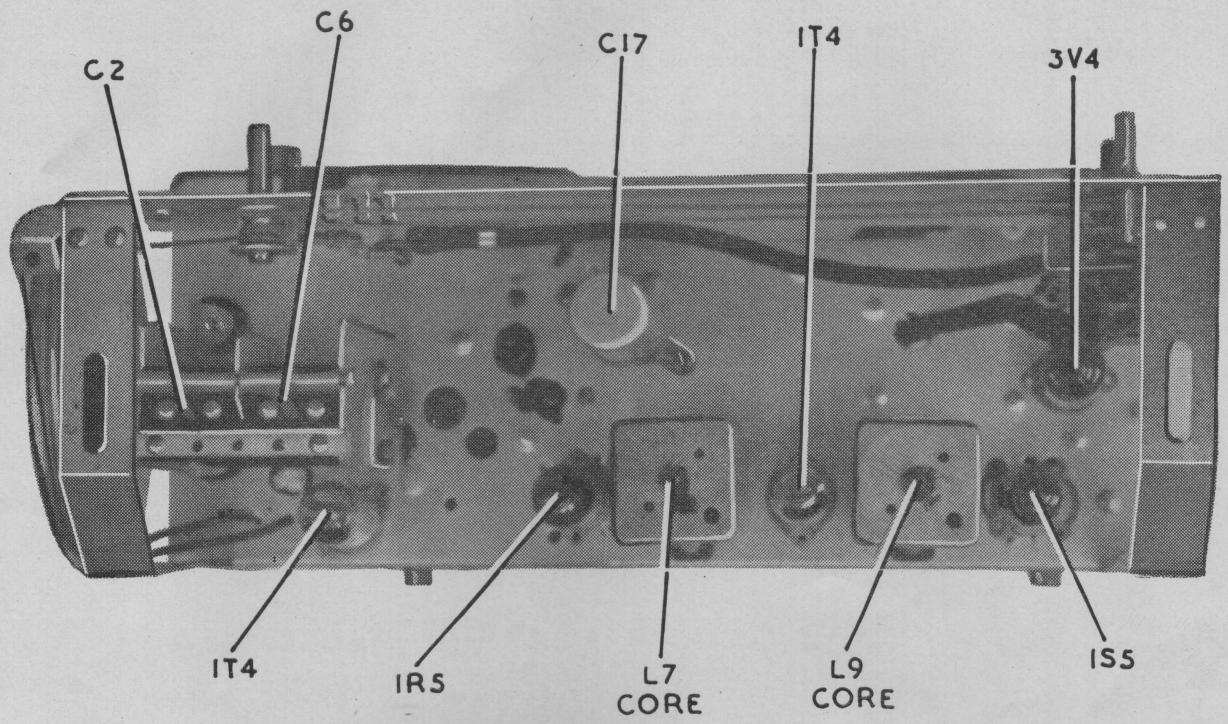
VALVES	Bias Volts Max.†	Bias Volts Med.†	Screen Grid to Chassis Volts Max.	Screen Grid to Chassis Volts Med.	Anode to Chassis Volts Max.	Anode to Chassis Volts Med.	Anode Current mA Max.	Anode Current mA Med.	Filament Volts Max.	Filament Volts Med.
1T4 R.F. Amp.	0	0	35	25	82	45	1.3	0.6	1.4	1.4
1R5 Converter	0	0	50	35	50	35	0.8	0.3	1.4	1.4
1T4 I.F. Amp.	0	0	35	25	84	85	1.1	0.6	1.4	1.4
1S5 Det., A.F. Amp., A.V.C.	0	0	15*	15*	20*	20*	0.06	0.06	1.4	1.4
3V4 Output	−5.5	−3.0	84	50	80	85	6.0	3.5	1.4	1.4

† Max. = Maximum position of Battery Switch.

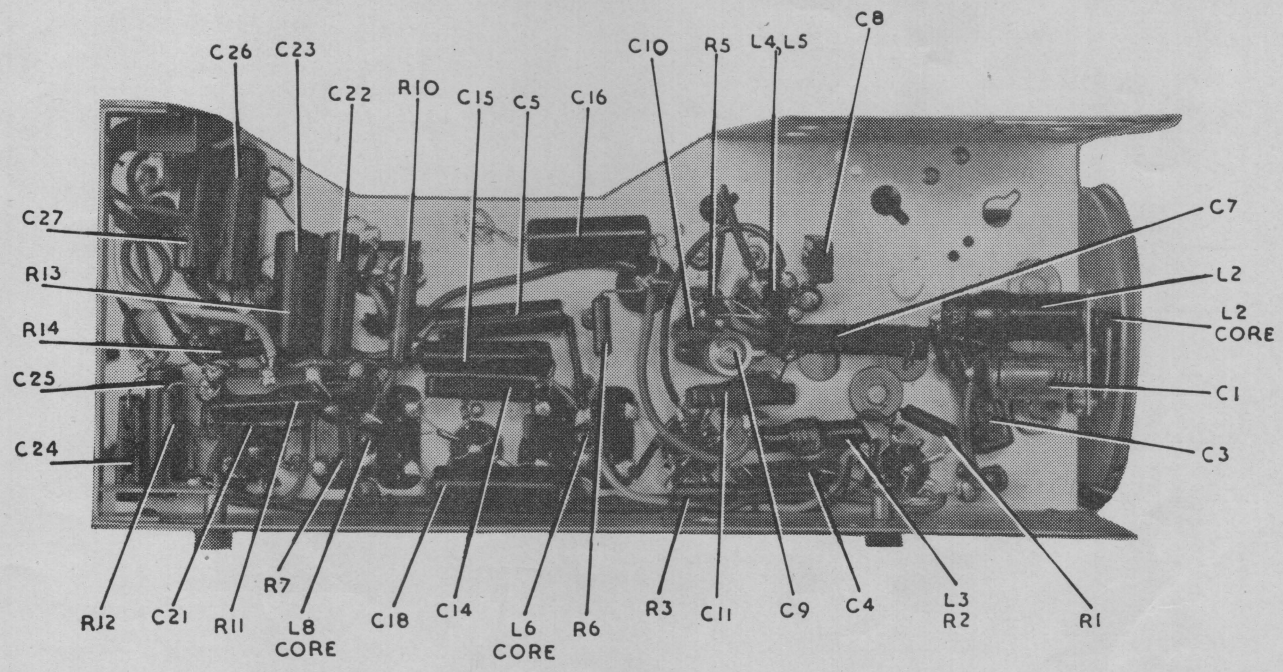
† Med. = Medium position of Battery Switch.

* Calculated from measured current. An ordinary voltmeter will register a lower value.

Measured with no signal input. Volume control at maximum clockwise.



CHASSIS [Top View] — Model J75MA



CHASSIS [Underneath View] — Model J75MA