

HOTPOINT-BANDMASTER

PORTABLE MODELS G75MA & G75MAZ

FIVE VALVE, BROADCAST, BATTERY OPERATED SUPERHETERODYNES

INCORPORATING DATA ON 1948 CAR RADIO.

1947 SERIES

ELECTRICAL SPECIFICATIONS.

FREQUENCY RANGES:

Medium Wave 540-1600 Kc/s (555-187.5 M.)

INTERMEDIATE FREQUENCY 455 Kc/s

BATTERY VOLTAGES:

"A" Battery 1.5 volts

"B" Battery 90 volts

BATTERY CONSUMPTION:

"A" Battery 300 mA.

"B" Battery .. "Bty. Full," 14 mA., "Bty. Saving," 9 mA.

LOUDSPEAKER:

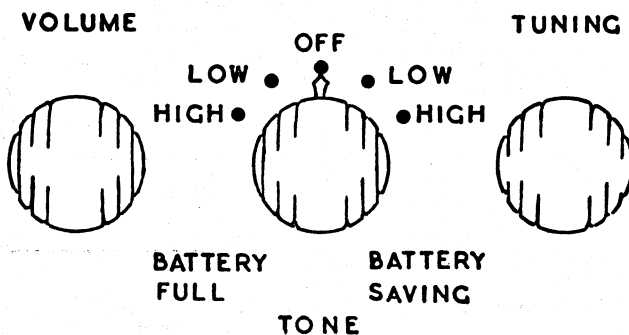
5 inch Permanent Magnet—Code No. AC32.

Transformer—XA8.

V.C. Impedance—3 ohms at 400 C.P.S.

UNDISTORTED POWER OUTPUT 200 milliwatts
on "Full Battery."

CONTROLS:

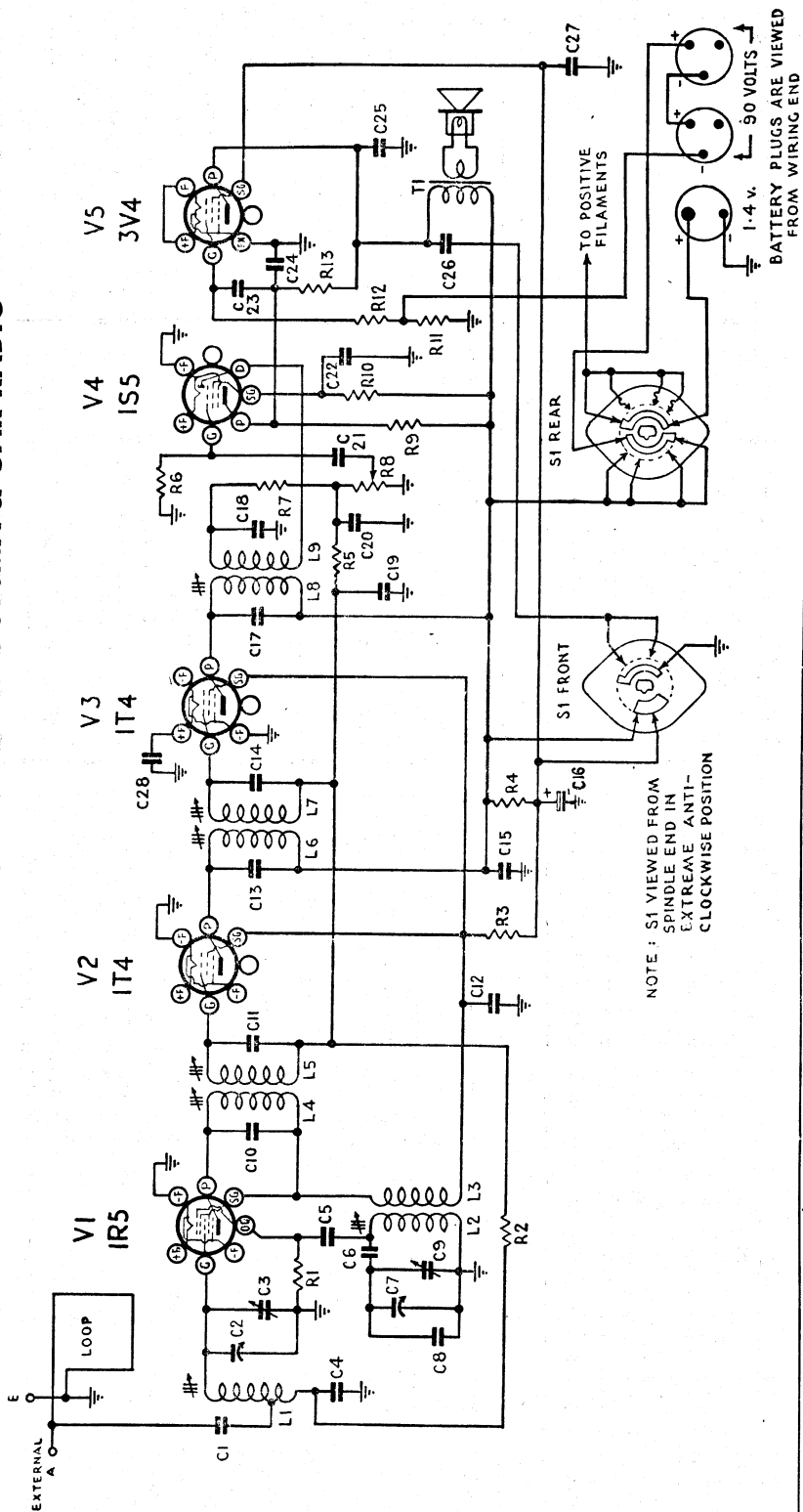


MECHANICAL SPECIFICATIONS.

	Height.	Width.	Depth.
Cabinet Dimensions (inches)	10 $\frac{1}{4}$	12 $\frac{3}{4}$	8 $\frac{5}{8}$
Chassis Base Dimensions (inches) ..	2 $\frac{1}{2}$	11	5 $\frac{1}{2}$

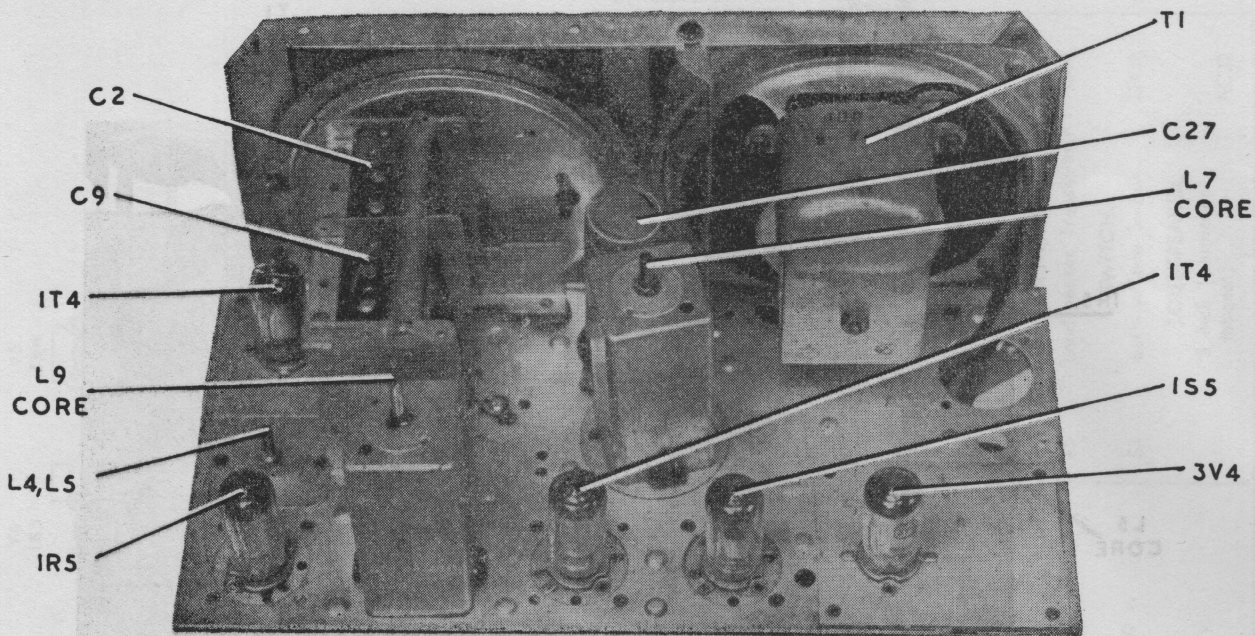
	Height.	Width.	Depth.
Carton Dimensions (inches)	11	13	9
Weight (nett lbs.)	19 lbs. complete with batteries		

CIRCUIT DIAGRAM & CODE — Models G75MA & CAR RADIO

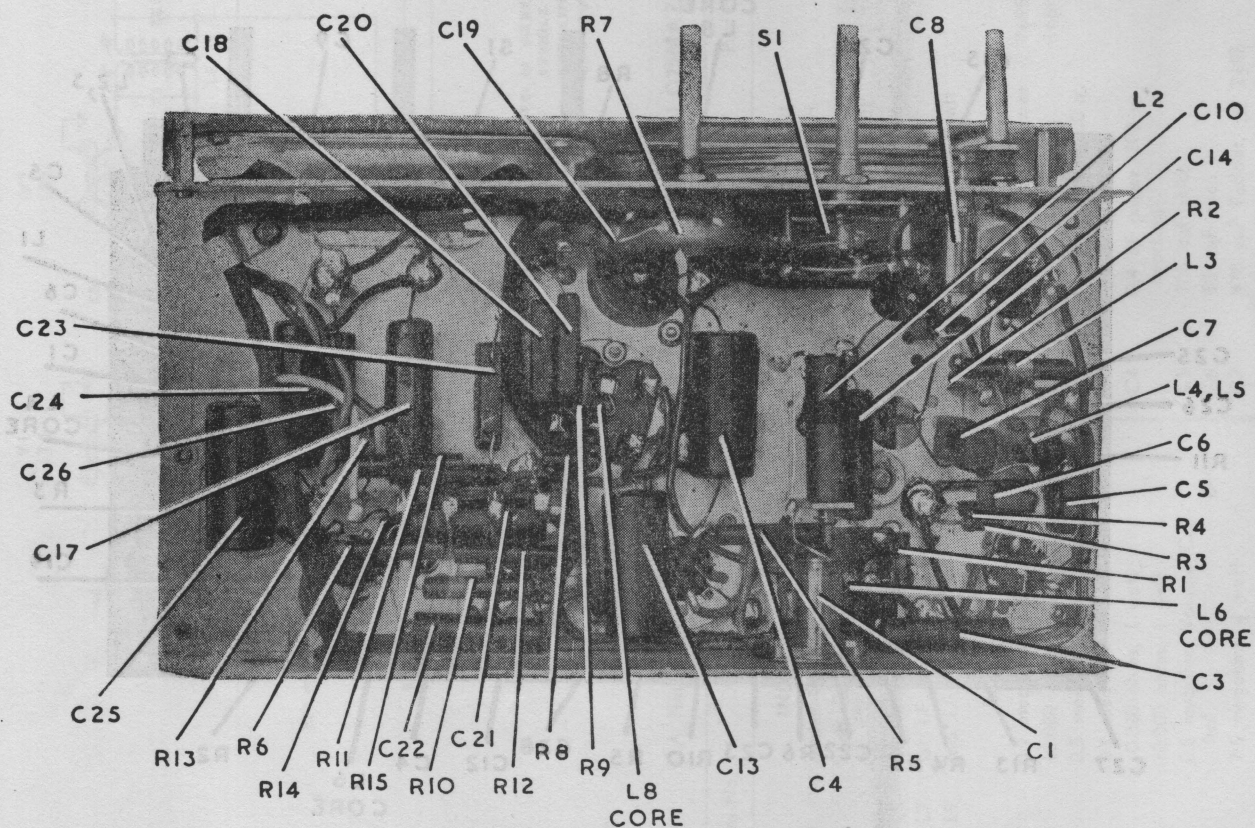


NOTE: S1 VIEWED FROM SPINDLE END IN EXTREME ANTI-CLOCKWISE POSITION

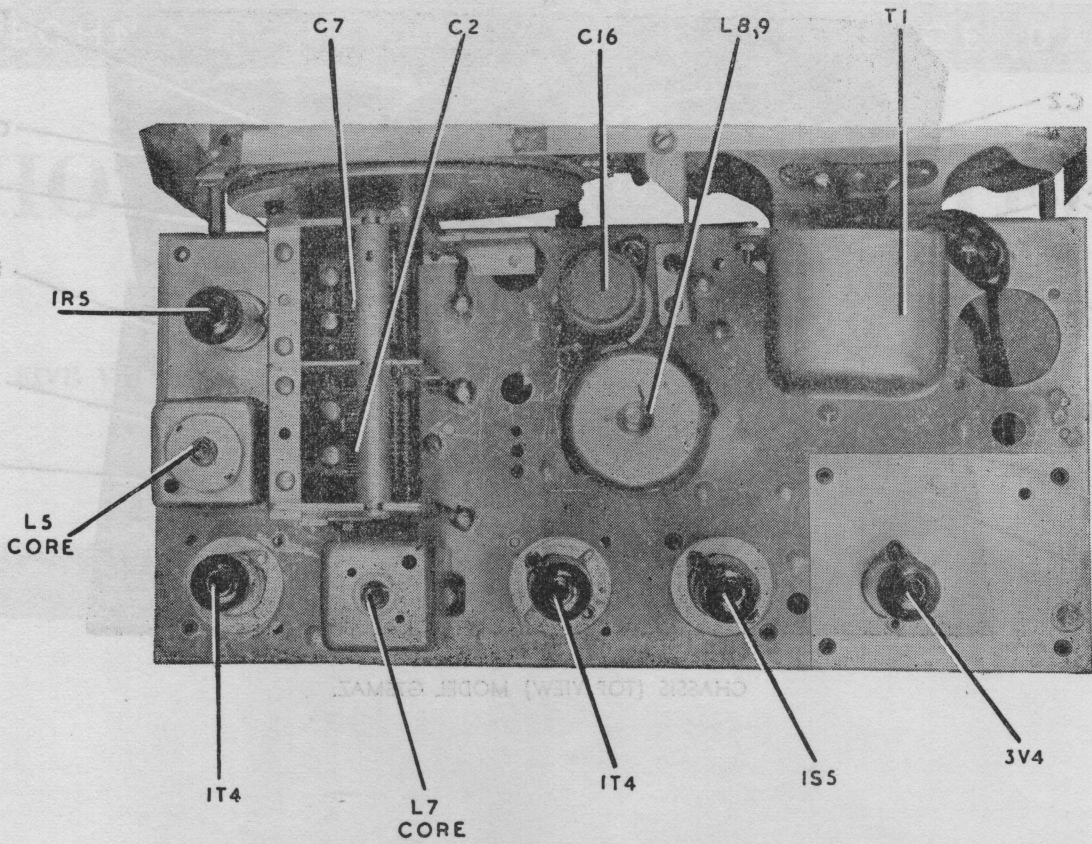
Code No.	Description.	Part No.	Code No.	Description.	Part No.	Code No.	Description.	Part No.
L1	INDUCTORS.					C23	0.025 uF paper, 400 v. working	
L2, L3	Aerial Coil	20711	R11	400 ohms, 1/2 watt		C24	100 uF mica	
L4, L5	Oscillator Coil	7638	R12	1 megohm, 1/2 watt		C25	0.0025 uF paper, 600 v. working	
L6, L7	1st I.F. Transformer	22416	R13	3.2 megohms, 1 watt		C26	0.025 uF paper, 400 v. working	
L8, L9	2nd I.F. Transformer	22416	CAPACITORS.			C27	0.005 uF paper, 600 v. working	
R1	RESISTORS.	15483	C1	0.05 uF paper, 200 v. working		C28	0.4 uF paper, 200 v. working	
R2	0.1 megohm, 1/2 watt		C2	12-430 uF tuning	15686	TRANSFORMER.		
R3	0.1 megohm, 1/2 watt		C3	3-25 uF air trimmer	16959	T1	Loudspeaker Transformer	XA8
R4	25,000 ohms, 1 watt		C4	0.05 uF paper, 200 v. working		S1	Battery/Tone Switch	22426
R5	10,000 ohms, 1 watt		C5	50 uF mica		LOUDSPEAKER.		
R6	2.5 megohms, 1 watt		C6	470 uF padder	15686	5 inch (permanent Magnet)		
R7	10 megohms, 1 watt (in 3rd I.F. Assy.)		C7	12-430 uF tuning				
R8	0.5 megohm, Volume Control	6491	C8	14 uF mica				
R9	1 megohm, 1 watt		C9	3-25 uF air trimmer				
R10	3.2 megohms, 1 watt		C10	70 uF mica				
			C11	70 uF mica				



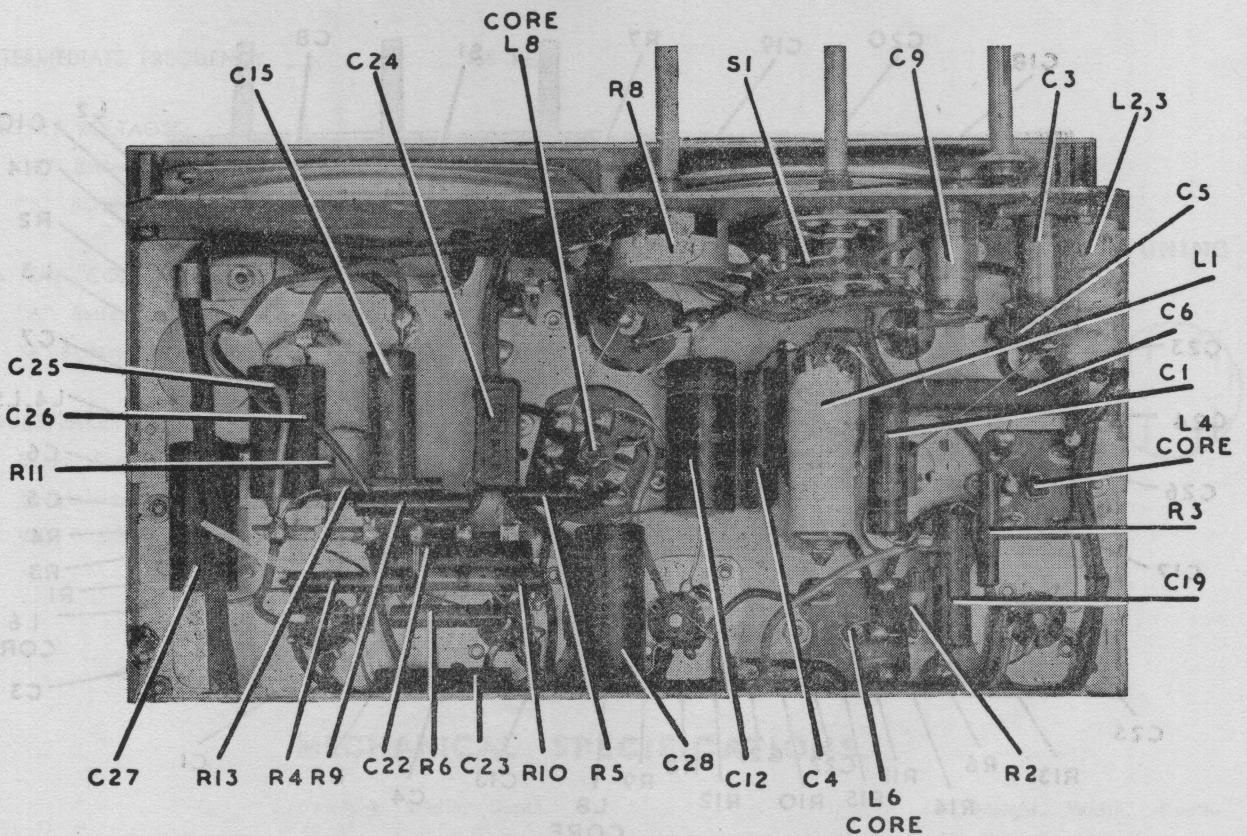
CHASSIS (TOP VIEW) MODEL G75MAZ.



CHASSIS (UNDERNEATH VIEW) MODEL G75MAZ.



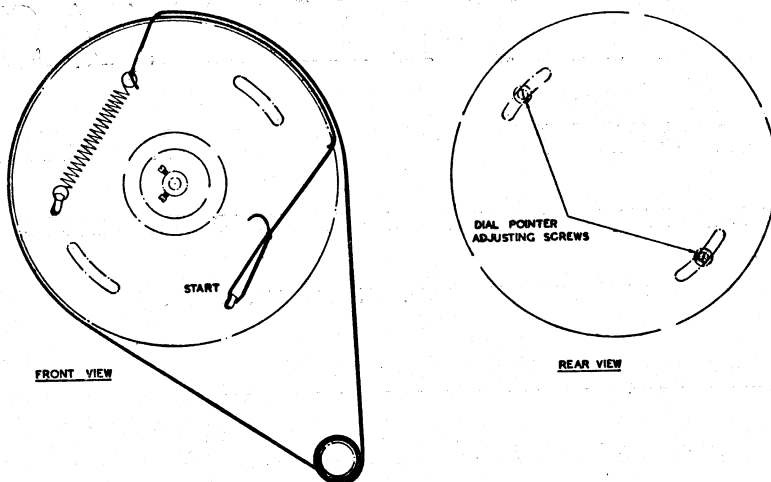
CHASSIS (TOP VIEW) MODEL G75MA and CAR RADIO.



CHASSIS (UNDERNEATH VIEW) MODEL G75MA and CAR RADIO.

Dial Pointer Adjustment.

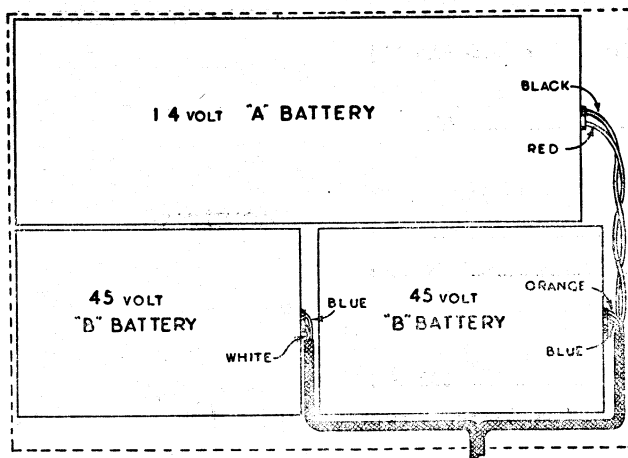
To shift the position of the dial pointer, loosen two screws in the rear of the drive drum—see accompanying diagram—move the drum to the required position and re-tighten the screws.



GENERAL DESCRIPTION.

The Models G75MA, G75MAZ and Car Radio are portable models and are housed in cases attractively finished in weatherproof baggage cloth. They embody a hinged cover, which effectively protects the dial and controls from damage, dust or weather.

Features of design include: Tropic-proof construction, automatic volume control, magnetite cores in I.F. transformers, oscillator coil and aerial coils, air-dielectric trimming capacitors.



ALIGNMENT PROCEDURE.

Manufacturers' Setting of Adjustments.

The receiver is tested by the manufacturers 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.
- (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 — Models G75MA & CAR RADIO

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 portion)	455 kc/s	540 kc/s	L8 (core)
2	Aerial section of gang (rear portion)	455 kc/s	540 kc/s	L7 (core)
3	Aerial section of gang (rear portion)	455 kc/s	540 kc/s	L6 (core)
4	Aerial section of gang (rear portion)	455 kc/s	540 kc/s	L5 (core)
5	Aerial section of gang (rear portion)	455 kc/s	540 kc/s	L4 (core)
Repeat above adjustments until the maximum output is obtained.				
6	* Inductively coupled to loop	540 kc/s	540 kc/s	L.F. Osc. Core Adj. (L2)
7	* Inductively coupled to loop	1500 kc/s	1500 kc/s	H.F. Osc. Adj. (C9)
8	* Inductively coupled to loop	600 kc/s	600 kc/s	L.F. Aerial Core Adj. (L1)
9	* Inductively coupled to loop	1500 kc/s	1500 kc/s	H.F. Aerial Adj. (C3)

* 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 flat against the loop.

ALIGNMENT TABLE — Model G75MAZ

Order.	Connect "high" side of generator to:	Tune generator to:	Tune receiver Dial to:	Adjust for maximum peak output:
1	Aerial section of gang (front portion)	455 kc/s	540 kc/s	L9 (core)
2	Aerial section of gang (front portion)	455 kc/s	540 kc/s	L8 (core)
3	Aerial section of gang (front portion)	455 kc/s	540 kc/s	L7 (core)
4	Aerial section of gang (front portion)	455 kc/s	540 kc/s	L6 (core)
Repeat above adjustments until the maximum output is obtained				
5	Aerial section of gang (front portion)	540 kc/s	540 kc/s	L.F. Osc. Core Adj. (L4)
6	Aerial section of gang (front portion)	1500 kc/s	1500 kc/s	H.F. Osc. Adj. (C8)
7	* Inductively coupled to loop	600 kc/s	600 kc/s	L.F. Aerial Core Adj. (L2)
8	* Inductively coupled to loop	1500 kc/s	1500 kc/s	H.F. Aerial 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.

SOCKET VOLTAGES — Models G75MA & CAR RADIO

Valves.	Bias Volts.		Screen Grid to Chassis Volts.		Anode to Chassis Volts.		Anode Current mA.		Filament Volts.	
	FB*	BS*	FB	BS	FB	BS	FB	BS	FB	BS
1R5 Converter	0	0	33†	25†	33†	25†	0.4	0.2	1.4	1.4
1T4 I.F. Amplifier	0	0	33†	25†	85	87	1.1	0.7	1.4	1.4
1T4 I.F. Amplifier	0	0	33†	25†	85	87	1.1	0.7	1.4	1.4
1S5 Detector	0	0	10†	10†	10†	10†	0.1	0.1	1.4	1.4
3V4 Output	-5.5	-3.5	85	60†	80	83	7.5	5.0	1.4	1.4

* FB = Full battery position of Battery/Tone Switch.

BS = Battery saving position of Battery/Tone Switch.

Measured with no signal input.

† These readings may vary depending on the resistance of the voltmeter used.

SOCKET VOLTAGES — Model G75MAZ

Valves.	Bias Volts.		Screen Grid to Chassis Volts.		Anode to Chassis Volts.		Anode Current mA.		Filament Volts.	
	FB†	BS†	FB	BS	FB	BS	FB	BS	FB	BS
1T4 R.F. Amp.	0	0	45	30	84.5	86.5	1.7	0.7	1.4	1.4
1R5 Converter	0	0	45	30	45	30	0.5	0.2	1.4	1.4
1T4 I.F. Amp.	0	0	45	30	84.5	86.5	1.7	0.7	1.4	1.4
1S5 Det., A.F. Amp. A.V.C.	0	0	25*	25*	30*	30*	0.07	0.07	1.4	1.4
3V4 Output	-5.5	-3.5	84.5	45	81	85	7.5	5.0	1.4	1.4

† FB = Full Battery position of Battery/Tone Switch.

BS = Battery Saving Position of Battery/Tone Switch.

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

Measured with no signal input.

MECHANICAL REPLACEMENT PARTS

Item.	Part No.	Item.	Part No.
Cabinet	} G7	Dial Scale, Model G75MA, G75MAZ	23301
Cabinet back		Model Car Radio	23301
Cable, battery	20713	Drum, drive assembly	20130
Cable, volume control	20712	Knob, assembly	22433
Chassis end—		Knob	17603
Right-hand	22417	Socket, valve	19965
Left-hand	20124	Strip tag, 1 way	7628
		6 way	22423

D.C. RESISTANCE OF WINDINGS.

Winding.	D.C. Resistance in ohms.
Aerial Coil (G75MA and Car Radio only)	4
Tapped Portion	*
Aerial Coupling Coil (G75MAZ only)	*
Oscillator Coil—	
Primary	3
Secondary	8
I.F. Transformer Windings—	
1st and 2nd I.F.	10
3rd I.F. (G75MA and Car Radio only)	20
Loudspeaker Input Transformer—	
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.