



RADIO CORPORATION PTY. LTD.

DIVISION OF ELECTRONIC INDUSTRIES LTD.

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BULLETIN: GL-1.
FILE: Receivers
Portable.
DATE: 1/12/50.
PAGE: 1.

TECHNICAL BULLETIN

SUBJECT-

MODEL "GL"

4 Tube Superheterodyne Broadcast Portable Receiver.

For operation from:

1.5 volts "A" Battery
and
90 volts "B" Battery (two 45V. "B" Batteries in series).

Current Consumption:

"A" Battery 250Ma.
"B" Battery 10.5Ma. (no signal).

Power Output:

250 milliwatts-max.
100 milliwatts-undistorted.

Tuning Range:

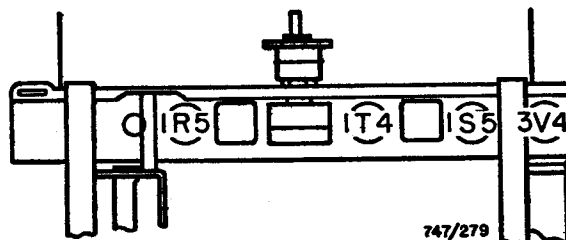
535-1620 Kc/s

Intermediate Frequency:

455 Kc/s

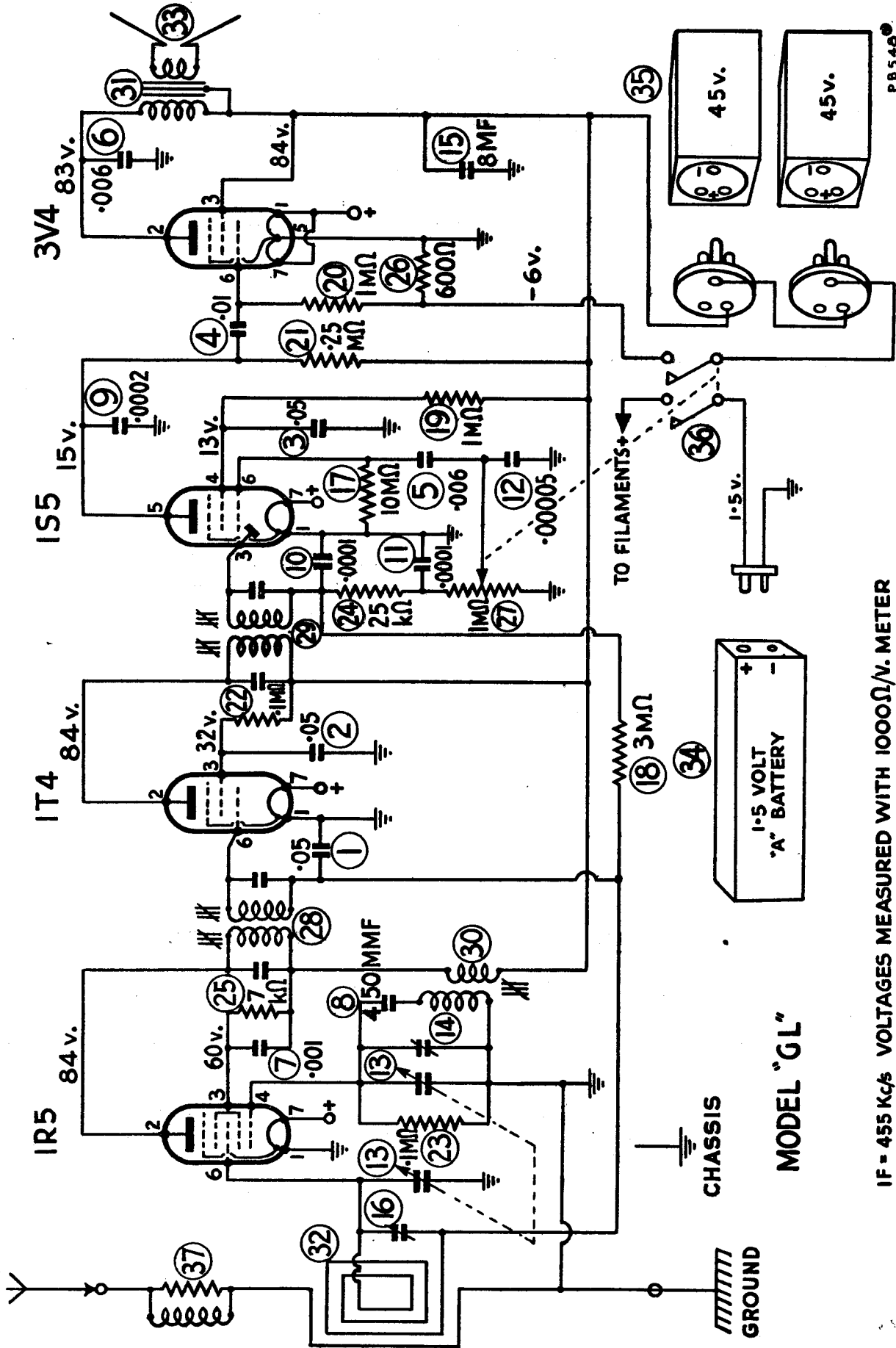
This Bulletin contains:-

Technical Specifications
Alignment Procedure
Circuit Diagram
Component Parts List
Connections for I.F. and R.F. Transformers



747/279

VALVE PLACEMENT DIAGRAM MODEL "GL"



IF = 455 Kc/s VOLTAGES MEASURED WITH 1000Ω/V. METER

SUBJECT- ALIGNMENT INSTRUCTIONS-MODEL "GL".

<u>Equipment</u>	<u>Alignment Conditions</u>
Signal Generator	Load impedance: 10,000 ohms
Output Meter	Output level: 25 milliwatts
Mica capacitor: 0.01MFD Part No. PC145 (for I.F.T. alignment)	Volume Control: Max. vol. (fully clockwise).
Dummy Antenna: 200MMFD. Mica capacitor	"A" Battery: 1.5 volts
Alignment Tools: Part No. PM581 and M195	"B" Battery: 90 volts (two 45 volt "B" batteries in series) Intermediate Freq: 455 Kc/s.

TO REMOVE CHASSIS FROM CABINET. Turn vol. control switch off, and from receiver remove cabinet base. Remove vol. control knob by pulling knob upwards.

Remove dial reading by unscrewing several screws in centre of dial. Remove the screws, one at each end of handle also screws in top of cabinet. Unsolder three wires connected to loop antenna then remove bakelite expander strip from between chassis legs and withdraw chassis from cabinet. Remove loop antenna from cabinet and reconnect to receiver (grid lead to loop sec. inside turn, A.V.C. lead to loop sec. outside turn, earth lead from chassis to primary earth terminal socket).

Fully mesh cond. gang plates and refit dial reading so that the centre screws are in the centre of the dial slots.

Fasten a piece of stiff wire to the chassis and fashion it into position to represent the pointer on the cabinet.

Operation No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
1.	To control grid of 1T4 tube (pin No. 6)	455 Kc/s	0.01MFD mica capacitor in series with generator	Turn cond. gang plates fully out of mesh. Peak 2nd I.F. trans. pri. and sec. for max. output.
2.	To control grid of 1R5 tube (pin No. 6)	455 Kc/s	0.01MFD mica capacitor in series with generator.	Turn cond. gang plates fully out of mesh. Peak 1st I.F. trans. pri. and sec. for max. output.

SUBJECT-

COIL AND TRANSFORMER CONNECTIONS

LOOP ANTENNA

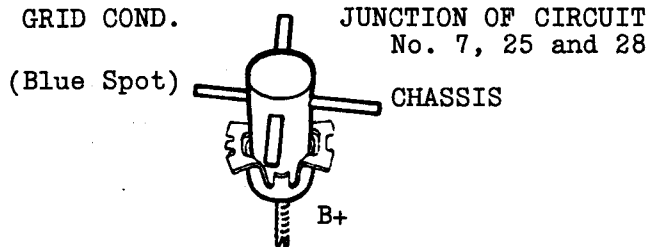
SECONDARY--(inside turn near centre of former) GRID.

SECONDARY--(Outside turn next to primary) AVC.

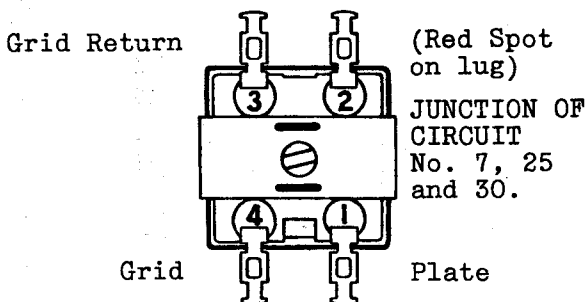
PRIMARY--(inside turn next to secondary) EARTH.

PRIMARY--(outside turn) ANTENNA LOADING COIL.

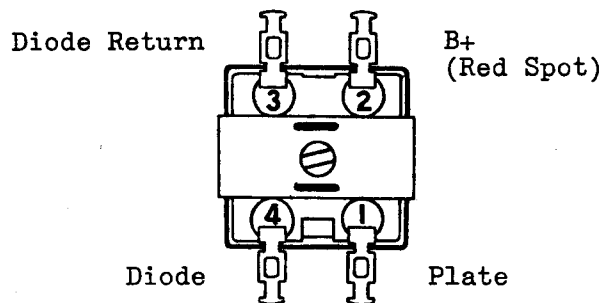
OSCL COIL



1st IF. TRANS.



2nd IF. TRANS.



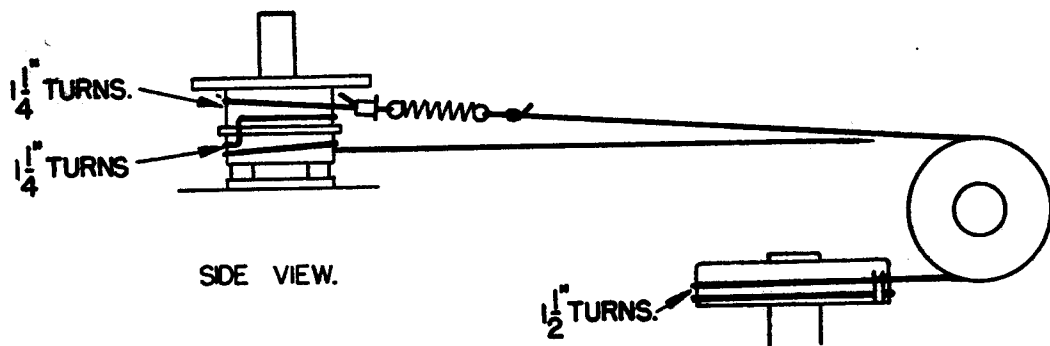
SUBJECT-

DIAL CORDING-MODEL "GL"

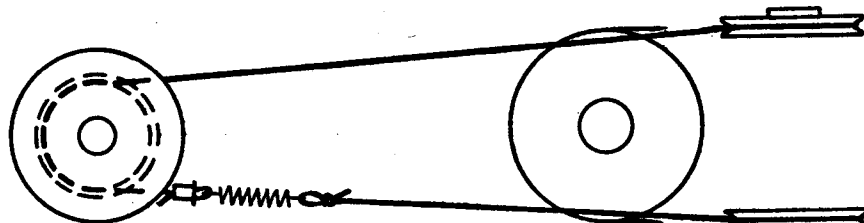
Length of cord required is 3 ft. 6 ins., which includes about 6 ins. to spare for tying to spring.

Cord part No. 7/282.

Spring part No. 31/304.



SIDE VIEW.



TOP VIEW.

CONDENSER PLATES FULLY OPEN.

SUBJECT-

ALIGNMENT INSTRUCTIONS-MODEL "GL".

Operation No.	Generator Connection	Generator Frequency	Dummy Antenna	Instructions
3.				Fully mesh the cond. gang plates and set the end of the wire pointer to the end of travel spot on the dial reading near 540 Kc/s.
4.	To AVC end of loop (outside turn of sec)	600 Kc/s	200MMFD Mica capacitor in series with generator	Turn dial to 600 Kc/s dial spot and adjust oscl. coil inductance trimmer (iron core) for max. output. Rock the cond. gang to and fro through the signal while adjusting.
5.	To AVC end of loop (outside turn of sec)	1400 Kc/s	200MMFD Mica capacitor in series with generator	Turn dial to 1400 Kc/s dial spot and adjust oscl. coil trim. condenser for logging and peak loop antenna trim. condenser for max. output.
6.				Repeat operations Nos. 4 and 5.
7.				Remove wire pointer and dial reading from chassis. Disconnect loop antenna from chassis and refit loop to cabinet. Refit chassis to cabinet, reconnect loop antenna to receiver and refit dial reading. The slotted holes in the dial reading allow the dial to be moved either way to log the stations on the dial to the pointer on the cabinet.
8.	To AVC end of loop (outside turn of sec)	1400 Kc/s	200MMFD Mica capacitor in series with generator	Turn dial reading to 1400 Kc/s. Re-peak loop antenna trimmer condenser for max. output.
9.				Refit the carrying handle and the cabinet base.

Tuning range after alignment 535-1620 Kc/s.

SUBJECT-

COMPONENT PARTS LIST-MODEL "GL".

Circuit No.	Description	Tol.	Rating	Part No.
1.	.05MFD PaPer Condenser	20%	200V.DCW.	PC102
2.	.05MFD Paper Condenser	20%	200V.DCW.	PC102
3.	.05MFD Paper Condenser	20%	200V.DCW.	PC102
4.	.01MFD Paper Condenser	20%	600V.DCW.	PC140
5.	.006MFD Paper Condenser	20%	600V.DCW.	PC217
6.	.006MFD Paper Condenser	20%	600V.DCW.	PC217
7.	.001MFD Mica Condenser	10%	1000VT.	PC108
8.	.00045MFD Mica Condenser	2 1/2%	1000VT.	PC727
9.	.0002MFD Mica Condenser	10%	1000VT.	PC124
10.	.0001MFD Mica Condenser	10%	1000VT.	PC110
11.	.0001MFD Mica Condenser	10%	1000VT.	PC110
12.	.00005MFD Mica Condenser	10%	1000VT.	PC141
13.	2 Gang Varb. Condenser			PC792
14.	0-30MMFD. Wire Wound Trimmer Cond.			PC663
15.	8MFD. Electrolytic			PC313
16.	1.5-18MMFD. Trimmer Cond.-part of circuit No. 32.			PC250
17.	10 Megohm Carbon Resistor	10%	1 Watt	PR236
18.	3 Megohm Carbon Resistor	10%	1/2 Watt	PR282
19.	1 Megohm Carbon Resistor	10%	1 Watt	PR520
20.	1 Megohm Carbon Resistor	10%	1/2 Watt	PR246
21.	.25 Megohm Carbon Resistor	10%	1 Watt	PR496
22.	100,000 ohm Carbon Resistor	10%	1 Watt	PR165
23.	100,000 ohm Carbon Resistor	10%	1/2 Watt	PR103
24.	25,000 ohm Carbon Resistor	10%	1/2 Watt	PR155
25.	7,000 ohm Carbon Resistor	10%	1 Watt	PR640
26.	600 ohm Carbon Resistor	10%	1 Watt	PR658
27.	1 Megohm Carbon Potentiometer with DP.ST. switch attached.			PR696
28.	I.F. Transformer			PT869
29.	I.F. Transformer			PT869
30.	Oscillator Coil			PT860
31.	Speaker Input Transformer 10,000 to 3.7 ohms Imped.			PT909 or PT950
32.	Loop Aerial			PT910
33.	5" Permag Speaker (less input trans.)			K124
34.	1.5 volt "A" Battery			M129
35.	34 volt "B" Battery (2)			M130
36.	Battery ON/OFF Switch- part of circuit No. 27.			-
37.	Loading Coil-part of circuit No. 32.			PT942
	Socket-7 pin (3)			A104/58
	Socket 7 pin (1)			A104/58-1
	Socket Rubber Mount Base			2/681
	Terminal Strip-8 lug			A150/30C
	Pulley Wheel-Brass			37/678
	Battery Plug-2 pin			336/30C
	Battery Plug-3 pin			335/30C
	Large Drum Ass'y			A102/753
	Handle Lug			34/678
	Dial Drive Bearing			41/678

SUBJECT-

COMPONENT PARTS LIST-MODEL "GL".

Circuit No.	Description	Tol.	Rating	Part No.
	Circlip-dial drive			7/678
	Dial Cord-34"			7/282
	Handle Pivot			3/678
	Screw-2-cabinet-chassis mount			11/203-3
	Dial Drive Pulley Ass'y			A112/678
	Dial Stop			53/678
	Knob Spring			161/181
	Dial Cord Spring			31/304
	Clip-I.F. Mount (2)			7/670
	Dial Reading N.S.W.			16/678-2
	Dial Reading VICT.-TAS.			16/678-3
	Dial Reading QLD.			16/678-4
	Dial Reading S.A.-W.A.			16/678-5
	Input Trans. Mount Strip			10/78-1
	Input Trans. Mount Strip			12/678
	Screw, $\frac{1}{4}$ " x $\frac{3}{32}$ " c'sk Hd. Flo. Bronze (2)			4/560-13
	Screw, $\frac{1}{4}$ " x $\frac{3}{32}$ " c'sk Hd. Cad. Plate (2)			17/560-2
	Screw, $\frac{3}{16}$ " x $\frac{1}{8}$ " Rd. Hd. Flo. Bronze (4)			11/203-4
	Screw, $\frac{5}{8}$ " x $\frac{1}{8}$ " c'sk. Hd. Cad. Plate (4)			11/560-10
	Screw, No. 4 x $\frac{1}{4}$ " Pk. Rd. Hd. Type "Z" (2)			39/560-2
	Screw, $1\frac{1}{2}$ " x $\frac{5}{32}$ " Rd. Hd. Cad. Plate (1)			16/560-22
	Washer, Steel-Flo. Bronze (2)			55/678

STYLING-ALL WALNUT CABINET

Cabinet Ass'y		A121/81-1
Cabinet Centre	Walnut	163/81-1
Cabinet End (Aerial/Earth)	Walnut	162/81
Cabinet End	Walnut	162/81-1
Handle Ass'y	-	A101/678-1
Handle	Walnut	171/81-1
Handle Inlay	Walnut	172/81-1
Knob	Walnut	17/678-3
Cabinet Base	Walnut	49/678-1

STYLING-WALNUT/CREAM CABINET

Cabinet Ass'y		A121/81-2
Cabinet Centre	Cream	163/81-2
Cabinet End (Aerial/Earth)	Walnut	162/81
Cabinet End	Walnut	162/81-1
Handle Ass'y	-	A101/678-2
Handle	Walnut	171/81-1
Handle Inlay	Cream	172/81-2
Knob	Walnut	17/678-3
Cabinet Base	Walnut	49/678-1