SERVICE BULLETIN No. 21

MODEL 25: 5-VALVE DUAL-WAVE RECEIVER.

First Edition: January, 1937.

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RADIO CORPORATION OF NEW ZEALAND LTD

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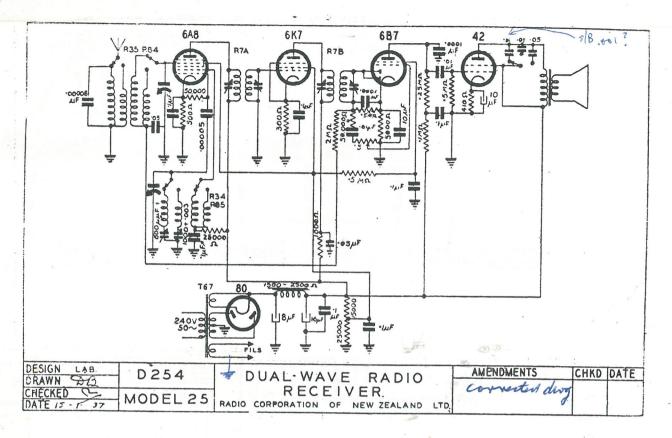
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1. GENERAL: This is a 5-valve dual-wave receiver in the low price class, using a mixed series of glass and metal valves. To obtain maximum selectivity as well as sensitivity, iron-cored intermediate frequency transformers are used. Tone variation is obtained by means of a three-position tone switch carefully graded to meet average requirements as determined by numerous tests. An interesting feature is the provision of a log scale indicating the frequencies of the principal Australian broadcast stations, as well as the principal shortwave-wave broadcasting stations of the world.

Power supply Power consumption Valves used Frequency changer I. F. amplifier Detector-amplifier Output pentode Rectifier Broadcast band Line-frequency band Line-frequency band Line-up frequencies Intermediate frequency Broadcast band Frequency band Line-frequency band Line-frequency band Chies-frequency band Line-up frequencies Intermediate frequency Broadcast band 6-16 mc/sec. Broadcast band 6-00 and 1400 kc/sec. High-frequency band 6 and 15 mc/sec. High-tension secondary of power transformer, from each rectifier plate to ground 320 volts Heater of rectifier All other heaters D.C: Unfiltered voltage, rectifier heater to ground Filtered voltage, speaker field to ground Other voltages to ground, using 1000 ohm per volt meter on 500 volt range except where therwise stated Valve. Function. Plate. Osc. Plate. Screen. Cathode 6A8 Freqy. Changer 225 volts 6K7 I.F. amplifier 225 — 98 3½ 6B7 Detector-amp. 40 — 13½ 2½ 42 Output pentode 215 — 225 14 *Broadcast and short-wave respectively. †100 Volt Range.		ELECTRICA					
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*Broadcast and short-wave respectively.	-	K7 1.F. a	mplifier		-	98	3±
*Broadcast and short-wave respectively.					Onesses	13†	2+
1400 87 1 5			t pentode	215	-	225	141
†100 Volt Range. ‡10 Volt Range.	7₿	roadcast and s	hort-wave resp	pectively.	1		- Maria
		†100 V	Volt Range.		1	10 Volt Range	
		DEGram				30.	

4. RESISTANCE TESTS:

" KEDISTANCE TESTS:		
Coil.	Where Measured.	Resistance in Ohms.
Power tran. primary	Across power cord	Approx. 40
H.T. secondary	Each rectifier plate to ground	Approx. 350
Speaker field	"Fil" of speaker socket	Approx. 1500
	"P" to "G" of speaker socket	
1st I.F. primary	See circuit	Apprex. 500
1st I.F. secondary	See circuit	Approx. 7
2nd I.F. primary	See circuit	Approx. 7
2nd I.F. secondary	See circuit	Approx. 10
Broadcast ant. primary		Approx. 10
Broadcast ant. secondary	4 to 3 of coil R 35	Approx. 15
Broadcast ant. secondary	1 to 2 of coil R 35	Approx. 8
Broadcast osc. primary	3 to 4 of coil R 34	Approx. 2
Broadcast osc. secondary	1 to 2 of coil R 34	Approx. 6
High-frequency ant. primary	7 to 5 of coil R 84	Approx. 1
High-frequency ant. secondary	1 to 3 of coil R 84	(Short circuit)
High-frequency osc. primary	5 to 7 of coil R 85	Approx. 2
High-frequency osc. secondary	1 to 3 of coil R 85	(Short circuit)



5. LINE-UP PROCEDURE: This is fully explained in Service Bulletin No. 12, "Standard Line-up Procedure for Multi-wave Receivers," a copy of which is obtainable on application to the Engineering Department if desired.

6. SENSITIVITY TESTS: (Microvolts input to give standard output of 50 milliwatts):

Frequency.	Applied to	Mi1
456 kc/sec.	Grid of 6K7 I.E	Microvolts
	Grid of 6K7 I.F. amplifier	4000
456 kc/sec.	Grid of 6A8 Frequency changer	50
1400 kc/sec.	Antenna through standard "dummy"	8
1000 kc/sec.	Antenna through standard "dummy"	12
600 kc/sec.	Antenna through standard "dummy"	15
15 Mc/sec.	Antenna through standard "dummy"	5
12 Mc/sec.	Antenna through standard "dummy"	6
9 kc/sec.	Antenna through standard "dummy"	10
6 Mc/sec.	Antenna through standard "dummy"	25

7. GRAMOPHONE CONNECTION: Owing to the very limited demand for gramophone connections, it is not standard practice to include such arrangements in ordinary models, but to supply details for the necessary modifications to be made. The circuit is shown and described in Service Bulletin No. 13," "Gramophone Attachment to Standard Model Receivers." The only parts required are one D.P.D.T. switch, one pick-up jack (or two terminals), and the requisite length of twin shielded wire. This bulletin is obtainable on application to the factory, who can, if necessary, supply the above parts already wired for connection to the receiver, at a nominal charge.

