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JERVICE BULLETIN

MODEL 57V: 5-Valve Broadcast Receiver for Vibrator Operation.

First Edition: August, 1937.

RADIO CORPORATION OF NEW ZEALAND LTD.

Printed by R.N.Z .-

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1. GENERAL: This model has been primarily designed for operation in conjunction with a vibrator power unit, although battery power may be utilised if desired. Two stages of intermediate frequency at 456 kilocycles per second are incorporated, giving good selectivity with high gain. The output valve is a battery pentode. Bias is obtained from the filament network, 2-volt valves being used in series groups on a 6-volt circuit. The battery drain when used in conjunction with a type VU-1 vibrator power unit is approximately 1 ampere without pilots, the latter being controlled by a special switch provided for the purpose, independent of the power supply to the receiver.

High tension supply	135 volts, approx. 19 mA.	
Undistorted power output		
	Frequency changer	1C6
	1st Intermed. frequency amp.	1A4
	2nd Intermed. frequency amp.	1A4
	Detector-amplifier	1B5
	Output pentode	1F4

Filament supply 6 volts, approx. 180 mA, (without pilots).

Intermediate Frequency			kc/sec.
Broadcast Band	550-	1500	kc/sec.
Line-up frequencies	Intermediate frequency	456	kc/sec.
	Broadcast band 600 and	1400	kc/sec.

3. VOLTAGE TESTS:

2. ELECTRICAL SPECIFICATIONS:

Total high-tension voltage	135	volts	D.C.
Filament battery voltage	6	volts	D.C.
Voltage across each filament App	rox. 2	volts	D.C.

Other voltages to ground, using 1000 ohm per volt meter on 500 volt range except where otherwise stated:—

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Valve.	Function.	Plate.	Osc. Plate.*	Screen.	Control Grid.
1C6	Freq. changer	135	90	50*	_
1A4	1st Î.F. amp.	135		.50*	_
1A4	2nd I.F. amp.	135	_	50*	_
1B5	Detaudio	65	- 1 mm	_	_
1F4	Pentode	130	- 70.0	135	
	* 100 volt range.				

4 RESISTANCE TESTS:

. RESISTANCE LESIS.		
Coil.	Where Measured.	Resistance in Ohms.
Speaker input tran.	Speaker socket	Approx. 600 (Total)
1st I.F. primary	See Circuit	Approx. 18
1st I.F. secondary	See Circuit	Approx. 18
2nd I.F. primary	See Circuit	Approx. 18
2nd I.F. secondary	See Circuit	Approx. 18
Broadcast ant. primary	4 to 3 of Coil R 35	Approx. 15
Broadcast ant. secondary	1 to 2 of Coil R 35	Approx. 10
Broadcast osc. primary	3 to 4 of Coil R 34	Approx. 2
Broadcast osc. secondary	1 to 2 of Coil R 34	Approx. 4

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.

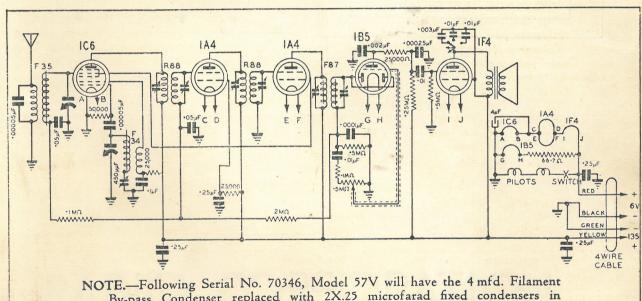
6. SENSITIVITY TESTS: (Microvolts input to give standard output of 50 milliwatts):

Frequency.	Applied to:	Microvolts.
456 kc/sec.	Grid of 1A4 1st I.F. amp.	20,000
456 kc/sec.	Grid of 1A4 2nd I.F. amp.	500
456 kc/sec.	Grid of 1C6 frequency changer	20
1400 kc/sec.	Antenna through standard "dummy"	7
1000 kc/sec.	Antenna through standard "dummy"	7
600 kc/sec.	Antenna through standard "dummy"	9

Note: It may be found that there are considerable divergences between valves of the same type, even if they are all of the same make. If difficulty is experienced in attaining any of the above sensitivity figures, it is suggested that other valves be tried.

7. GRAMOPHONE CONNECTION: Under some circumstances, it may be desired to attach a gramophone pick-up to this receiver. Owing to the limited demand for this arrangement, however, it is not standard practice to include it 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 Engineering Department, and the factory can, if necessary, supply the above parts already wired for connection to the receiver, at a nominal charge.



N	OTE.—Following Serial No. 70346, Model 57V will have the 4 mtd. Filament
	By-pass Condenser replaced with 2X.25 microfarad fixed condensers in
	parallel. The 25,000 ohm. screen feed resistance will be replaced with a
	50,000 ohm. resistance.

DESIGN LAB	D 274	5 VALVE BROADCAST RECEIVER	AMENDMENTS	CHKD	DATE
DRAWN gw					
CHECKED &		FOR VIBRATOR OPERATION			
DATE 6-8-37	MODELSIV	RADIO CORPORATION OF NEW ZEALAND LTD.			

