SERVICE BULLETIN

No. 78

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MODELS 100 and 101

5 Valve Broadcast Portable Receivers

(Utilising 1.4 volt filament valves.)

R.N.Z

RADIO CORPORATION OF NEW ZEALAND LTD.

80 Courtenay Place, Wellington, C3., New Zealand.

2/56

MODELS 100 & 101

5 Valve Broadcast Portable Receivers

(Utilising 1.4 volt filament valves.)

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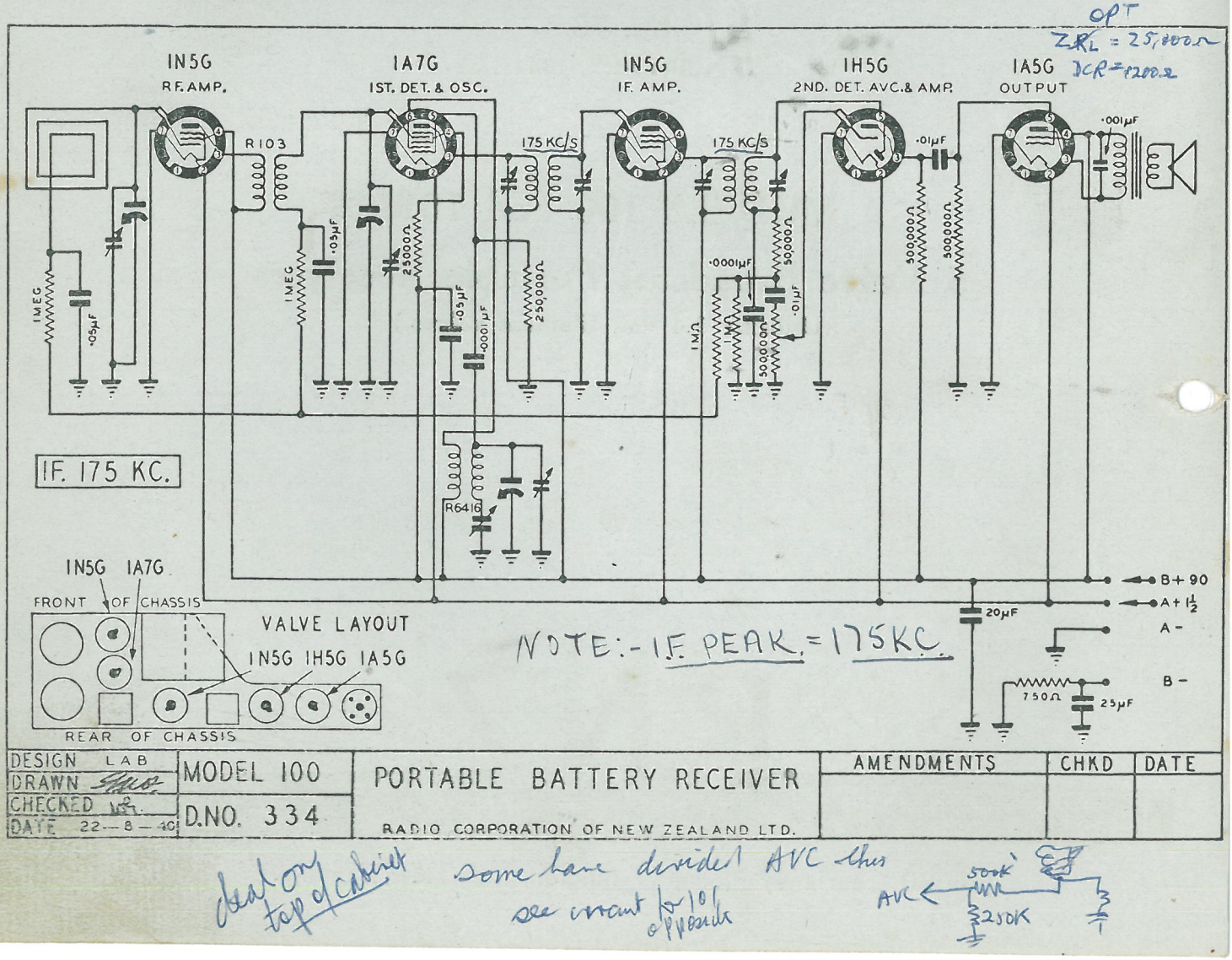
1. General Description.

Models 100 and 101 are both 5 valve Broadcast Superhetrodyne Receivers with automatic volume control designed for maximum sensitivity utilising the small frame aerial permanently built into the back of the receiver and totally enclosed. I.F. Transformers are iron cored with litz windings.

Special attention has been given to economy. These models utilise the larger size of 1.5 volt Dry "A" Battery (type P.R.8), and a "B" supply of 90 volts, comprising 2 portable batteries (P.R.45). There is a conservative expectation of approximately 200 hours' life from the battery equipment.

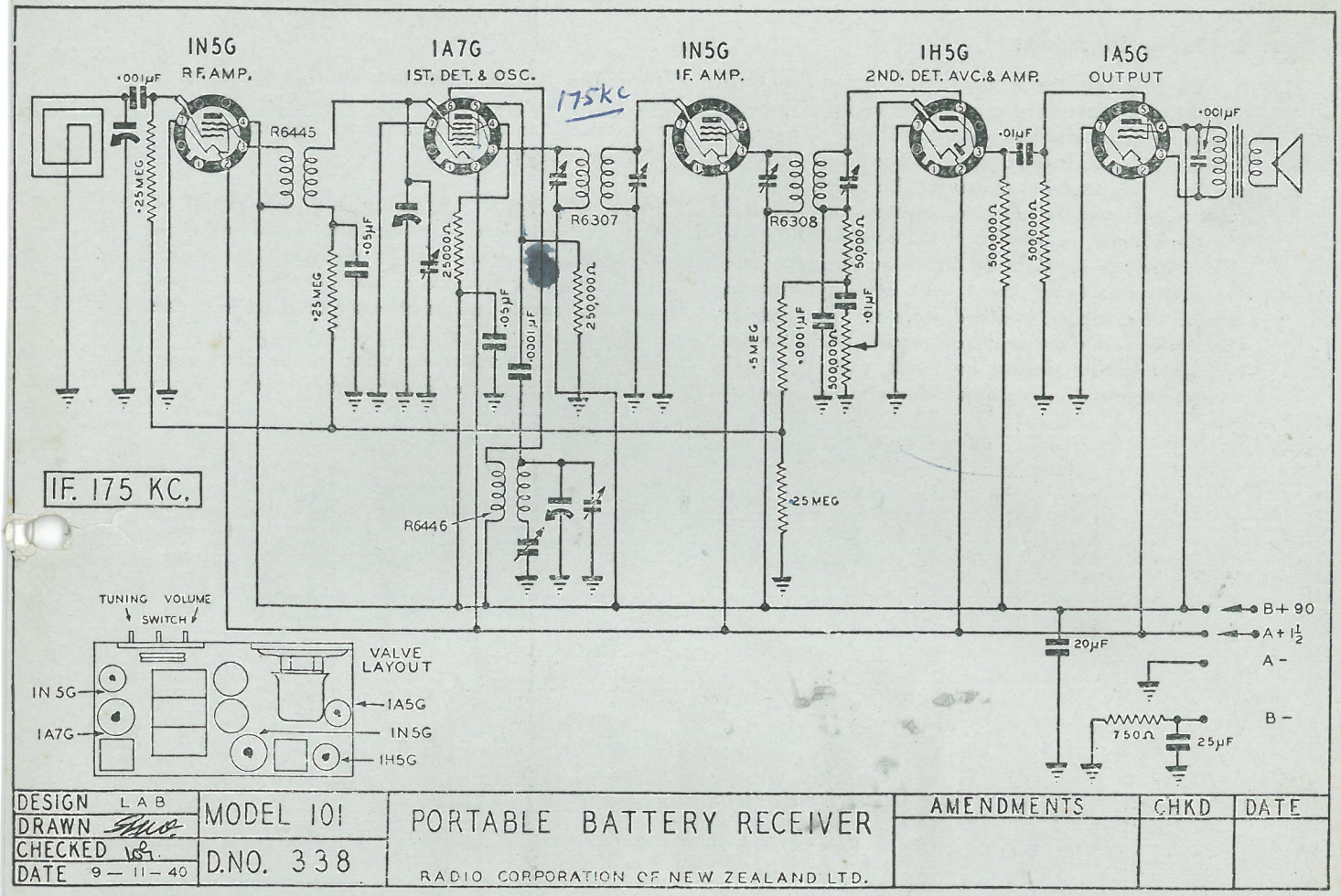
Model 101 differs from Model 100 only slightly in the circuit although it has a different lay-out in consequence of the dial being at the side of the cabinet instead of on top as with Model 100. Same valve complement is used.



DESIGN LAB DRAWN CHECKED DATE 22—8—40	MODEL 100 D.NO. 334	PORTABLE BATTERY RECEIVER RADIO CORPORATION OF NEW ZEALAND LTD.	AMENDMENTS	CHKD	DATE

dial on top of cabinet

some have divided AVC thus see circuit for 101 opposite



DESIGN LAB	MODEL 101	PORTABLE BATTERY RECEIVER	AMENDMENTS	CHKD / DATE
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DATE 9 — 11 — 40	D.NO. 338	RADIO CORPORATION OF NEW ZEALAND LTD.		

2. Electrical Specification.

Filament supply	1.4 volts
High tension supply	90 volts
Undistorted Power output	120 m/watts
Valves used—	
R.F. Amplifier	1N5GT
Frequency changer	1A7GT
I.F. Amplifier	1N5GT
Detector Amplifier	1H5GT
Output	1A5GT
Intermediate Frequency	175 k.c.
Line Up frepuencies	600 and 1400 k.c.

3. Voltage Tests.

Filament Battery Voltage	1.4 volts
High tension battery voltage	90 volts

Other voltages to chassis using 1000 ohm/volt meter on 100 volts range.

Valve.	Plate	Oscill. Plate.	Screen
1N5GT R.F. Amplifier	90	—	90
1A7GT Frequency changer	90	90	45
1N5GT I.F. Amplifier	90	—	90
1M5GT Detector amplifier	12	—	—
1A5GT Output	90	—	90

4. Resistance Tests.

	Where measured.	Res. in ohms.
Speaker input trans.		1100
1st I.F. Primary		80
1st I.F. Secondary		80
2nd I.F. Primary		80
2nd I.F. Secondary		80
Frame coil primary		Nil
Frame coil secondary		Nil
R.F. coil primary		70
R.F. coil secondary		4
Oscillaotr coil primary		2
Oscillator coil secondary		3

5. Sensitivity Tests.

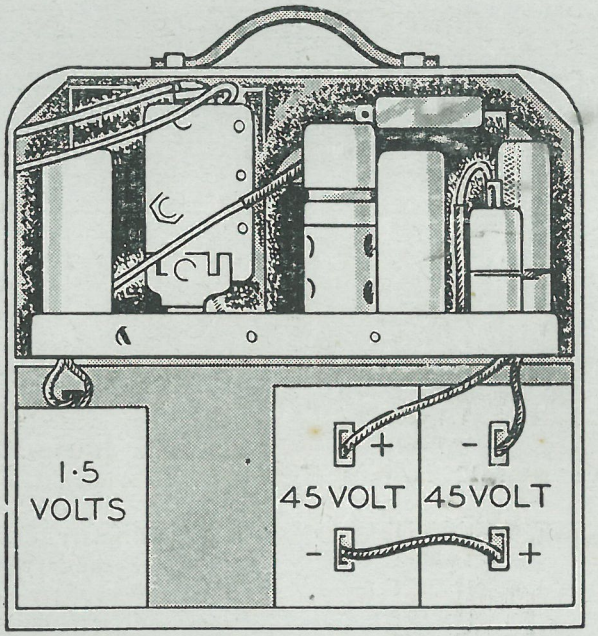
(Microvolts input to give standard output of 50 milliwatts)

Frequency.	Input to	Microvolts
175 k.c.	Grid of 1N5GT I.F. amplifier	75
175 k.c.	Grid of 1A7GT	5000
1400 k.c.	Aerial through standard dummy antenna	2½
1000 k.c.	,, ,, ,, ,,	10
600 k.c.	,, ,, ,, ,,	10

6. Line-up Procedure.

This is substantially explained in Service Bulletin No. 72 "Standard Line-up Procedure," a copy of which is obtainable on application. There is, however, an additional facility for loop antenna trimmer adjustment through the back of the cabinet. It will be noticed, looking at the back of the cabinet in Model 101 Portable Receiver, that there are three small holes on the left side, the lower two being fitted with metal grommets. Behind the top or unlined hole is the trimmer condenser screw for the loop aerial. **Adjustment of this trimmer should be made with the back securely screwed in position,** otherwise the capacity produced by the proximity of this aerial to the batteries and chassis when in working position will be reduced and the trimmer will not seem to give the necessary range.

Outside Aerial: When utilising the Model 101 Portable Receiver in a car, the metal bodywork of which may somewhat screen its enclosed aerial, or then again, if utilising the set when camping, an extra aerial and earth may be used if greater range is desired. The upper metal socket on the back of the receiver connects to the extra aerial being used, and the lower socket to the ground.



POSITION OF CHASSIS AND BATTERIES INSIDE PORTABLE CABINET OF MOD 101.