

SERVICE BULLETIN

MODEL 55A

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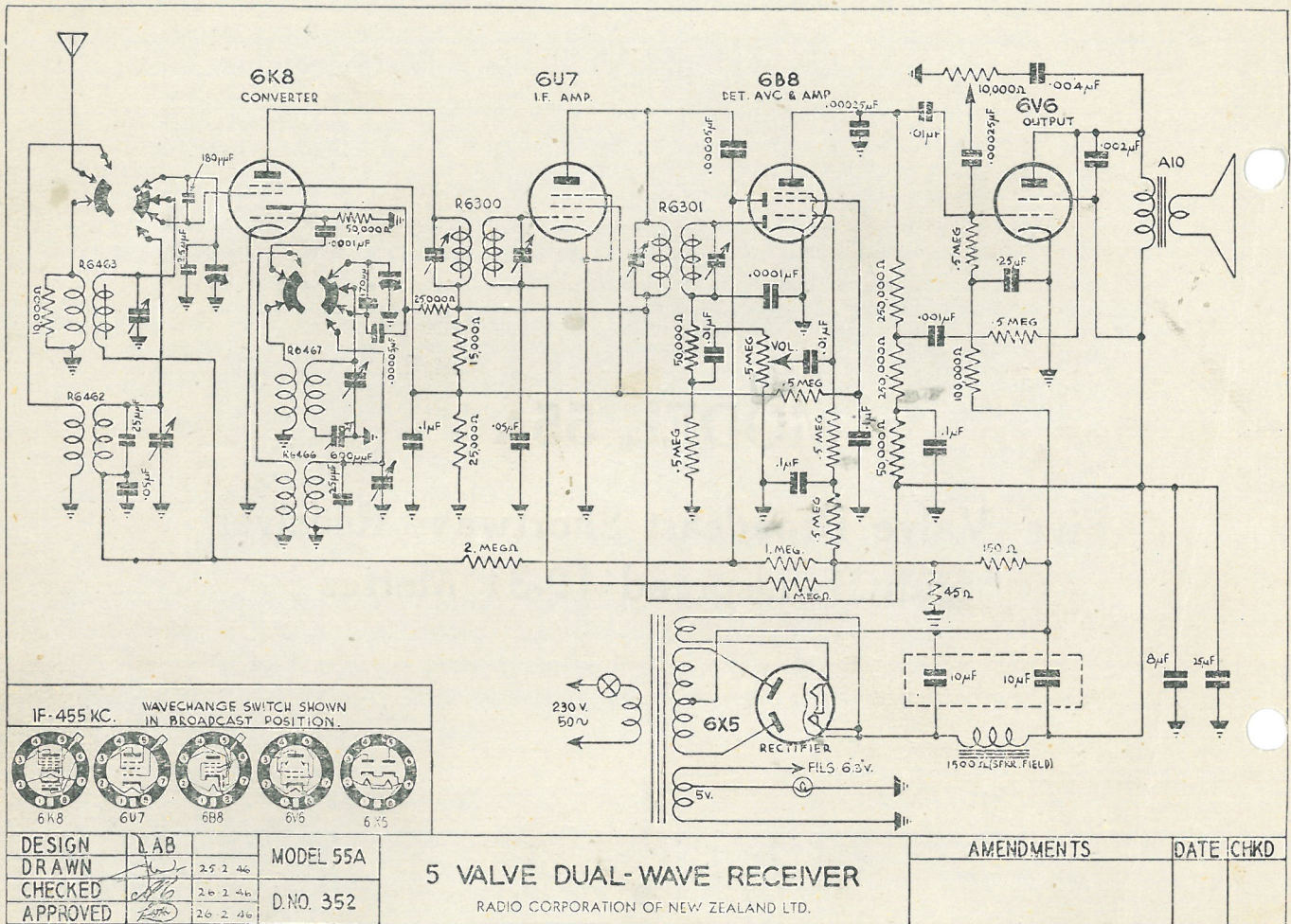
**Five Valve Broadcast Shortwave Receiver
with Bandsread 19-31 Metres**

RADIO CORPORATION OF NEW ZEALAND LTD.

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

MODEL 55A

5 Valve Broadcast-Shortwave Receiver



NOTES ON MAIN COMPONENTS

Power Transformer: Type T57
Output Transformer: Type A10
Tuning gang: 2 gang Plessey K. 1852/22
Wavechange Switch: 2H 2XE

Dial lamp: 1 only Auto Type 6.3 v.
Dial Scale: OE.12, OE.24 or OE.24 (revised)
N.B.: Dial Scale No. OE.24 (revised) should be used for all replacement purposes.

1. GENERAL DESCRIPTION:

This is a 5 valve dual wave receiver incorporating expanded short wave tuning. It is notable for high sensitivity on both broadcast and short wave bands.

The short wave band covers from 9,400 to 15,600 k.c. This range includes the three principal short wave bands at 19, 25, and 31 metres, which occupy three times the length of dial scale that would be taken up if the band spread principle were not incorporated. This results in greater ease of tuning and means that short wave stations, that would normally be passed over, may be tuned in without difficulty.

A special oscillator circuit ensures that the oscillator frequency is unaffected by changes in A.V.C. voltage. This greatly reduces the effects of fading on short wave. To ensure constancy of calibration and alignment silvered-mica fixed condensers and high quality trimmers are used in all tuned circuits.

The tone control operates on the selective negative feedback principle, giving a wide range of control.

For Model 55A the valves used are as follows:

- 6K8 Converter
- 6U7 I.F. Amplifier
- 6B8 Detector Audio Amplifier and A.V.C.
- 6V6 Power Output.
- 6X5 Rectifier

2. ALIGNMENT PROCEDURE:

This is fully covered in Service Bulletin No. 72. "Standard Line-up Procedure for Multiband Receivers," a copy of which is obtainable on application to the Engineering Department. The intermediate frequency is 455 k.c. and the line-up points are 1400 and 600 k.c. on broadcast and 15,000 k.c. on the short wave band.

3. VOLTAGE TESTS:

A.C.

High voltage secondary of power transformer, from each rectifier plate to centre tap	340v.
Heater of Rectifier	5v.
All other Heaters	6v.
Dial Lamps	5v.

D.C. (Measured with a meter of 1000 ohms per volt sensitivity, between point indicated and chassis.)

First 10 mfd. electrolytic condenser	340v.
Second 10 mfd. electrolytic condenser	260v.
Screen of 6K8 and 6U7	100v.
Screens of 6K8 and 6U7	30v.
Plate of 6B8	40v.
Junction of 45 and 150 ohm resistors (A.V.C. delay bias)	3v.
Negative terminals of 10 mfd. condensers	13v.

All measurements should be made with the receiver tuned to approximately 1000 k.c. and with no signal input.

4. RESISTANCE TESTS:

Where measured.	Approx. D.C. resistance in ohms
Across power cord	45
Each rectifier plate to centre tap of power transformer secondary	400
Across speaker field	1500
Speaker transformer primary	600
I.F. transformer coils	5.54
B/C Aerial Primary	20
B/C Aerial Secondary	3
B/C Osc. Primary	1
B/C Osc. Secondary	3
S/W Aerial, R.F. and Osc. Primary	0
S/W Aerial, R.F. and Osc. Secondary	0
Between negative terminals of 10 mfd. electrolytic condensers and chassis	185

5. SENSITIVITY TESTS:

(Microvolts input to give standard output of 50 milliwatts.)

Frequency:	Input to	Microvolts:
455 k.c.	Grid of 6B8	2000
455 k.c.	Grid of 6K8	100
1,400 k.c.	Aerial lead through standard dummy antenna	25
1,000 k.c.	Aerial lead through standard dummy antenna	25
600 k.c.	Aerial lead through standard dummy antenna	27
15,200 k.c.	Aerial lead through standard dummy antenna	8.5
11,800 k.c.	Aerial lead through standard dummy antenna	9.5
9,600 k.c.	Aerial lead through standard dummy antenna	11

