



SERVICE BULLETIN

No. 75

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MODEL 52S *+ 56*

*this is
(D. 337)*

5 Valve Dual-Wave Receiver
with Expanded Short-Wave Tuning.

*model 56B uses 6K8g 6K7g 6B7
• 6F6g 5Y3g
otherwise same as 56*

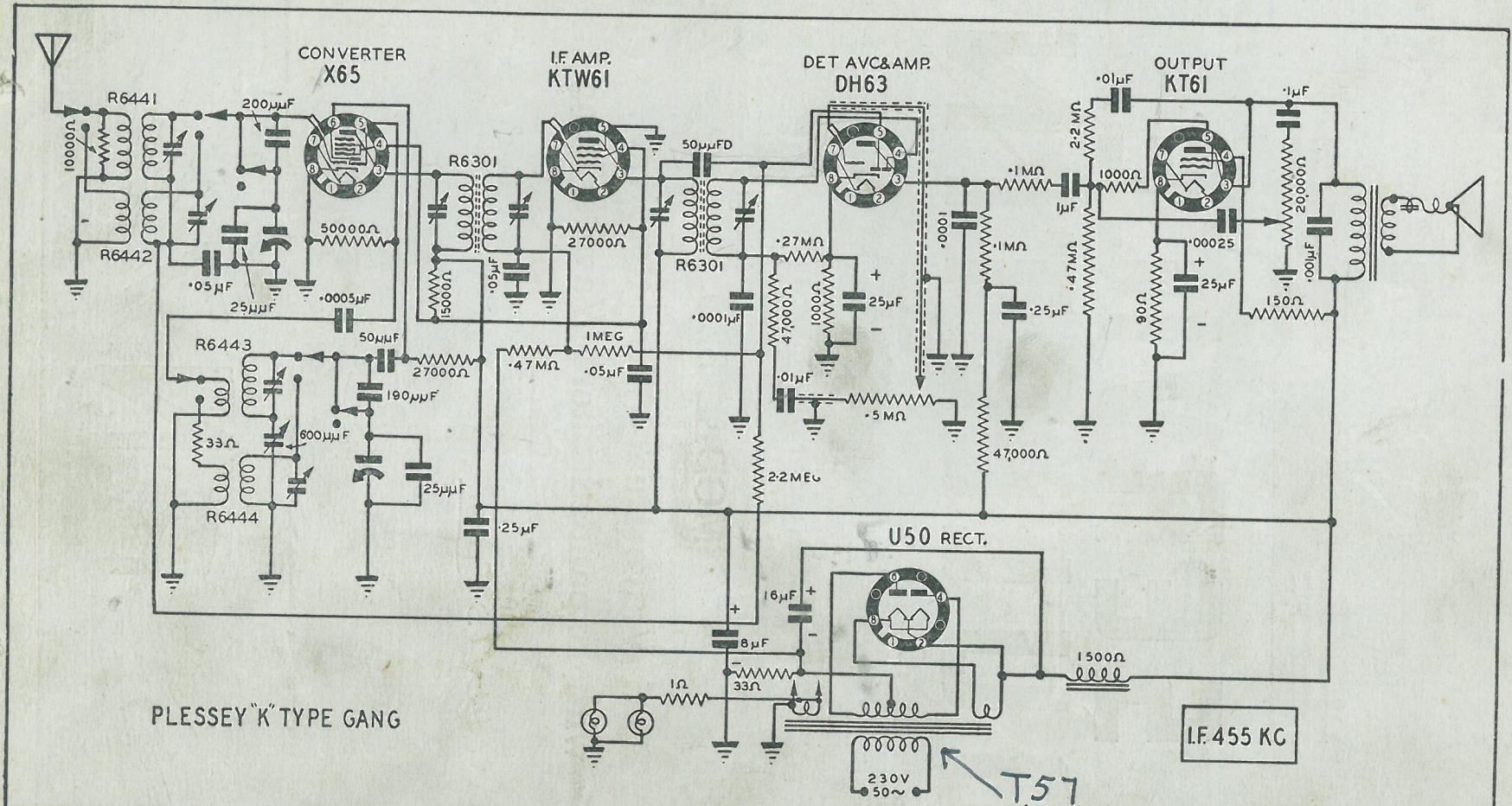
R.N.Z.

RADIO CORPORATION OF NEW ZEALAND LTD.

80 Courtenay Place, Wellington, C.3., New Zealand.

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MODEL 52S: 5 Valve Dual-Wave Receiver with Expanded Short-Wave Tuning.



DESIGN	LAB	MODEL 52S	5 VALVE DUAL-WAVE RECEIVER.		AMENDMENTS	CHKD	DATE
DRAWN	<i>SW</i>	D.NO. 337	RADIO CORPORATION OF NEW ZEALAND LTD.				
CHECKED	<i>VH</i>						
DATE	7-10-40						

no parts on SW

1. General Description:

This is a five-valve dual wave receiver, incorporating expanded short-wave tuning. The sensitivity on both broadcast and short-wave bands is high, and due to the use of a special triode-hexode converter valve, the noise level is low. The short-wave range covers the three main short-wave bands at 19, 25 and 31 metres, and tuning is three times easier than with the usual type of dual-wave receiver. This means that many short-wave stations that would otherwise be passed over may be tuned-in with ease.

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 the tuned circuits.

The tone control operates on the selective negative feed back principle, giving a wide range of control. A fixed amount of negative feed back is also incorporated to improve the clarity of the reproduction.

The valves used are as follows:—

X65 Converter.
KTW61 I.F. Amplifier.
DH63 Detector, A.V.C. and Audio Amplifier.
KT61 High Slope Output Tetrode.
U50 Rectifier.

2. Alignment Procedure:

This is fully covered in Service Bulletin No. 72, "Standard Line-up Procedure for Multi-band Receivers," a copy of which is obtainable on application to the Engineering Department.

The intermediate frequency is 455 k.c. and 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	335v.
Heater of Rectifier	5v.
All other Heaters	6v.
Dial Lamps	5v.
D.C. (Measured between point indicated and chassis)—	
16 mfd electrolytic condenser	340v.
8 mfd electrolytic condenser	230v.
Screen of X65 and KTW61	70v.
Plate of DH63	70v.
Cathode of KT61	4v.
Cathode of DH63	1v.
Cathodes of X65 and KTW61	0v.
Negative terminal of 16 mfd condenser	2.25v.

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

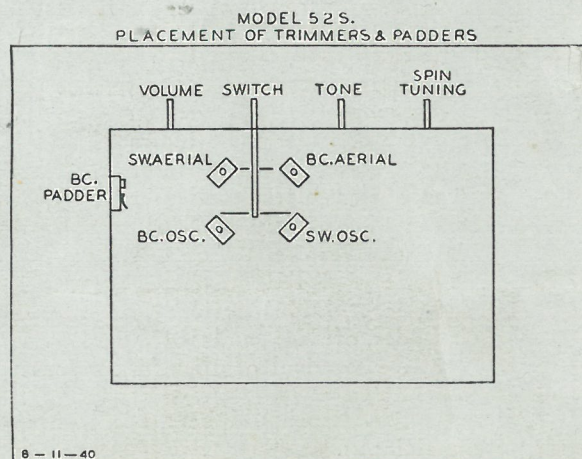
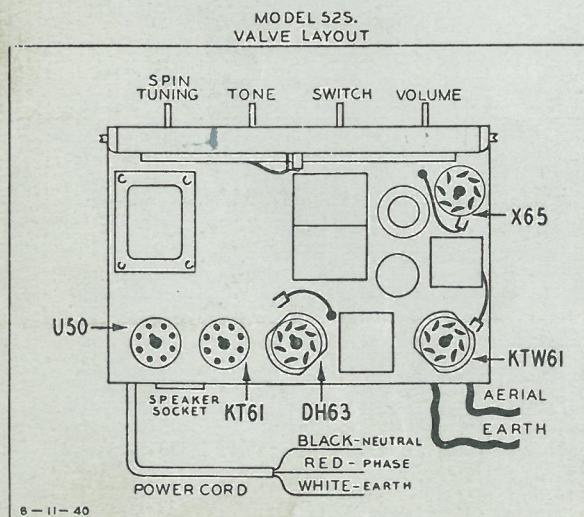
4. Resistance Tests:

Where measured:	Approx. resistance in ohms:
Across power cord	45
Each rectifier plate to centre tap of power transformer secondary	300
Across speaker field	1500
Speaker transformer primary	500
I.F. transformer coils	7
B/C aerial primary	20
B/C aerial secondary	4
B/C Osc. primary	2
B/C Osc. secondary	3
S/W aerial and osc. primary	0
S/W aerial and osc. secondary	0
Between negative terminal of 16 mfd electrolytic condenser and chassis	33
Between cathode of DH63 and chassis	1000
Between cathode of KT61 and chassis	90

5. Sensitivity Tests:

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

Frequency:	Input to:	Microvolts:
455 k.c.	Grid of KTW61	2000
455 k.c.	Grid of X65	60
1400 k.c.	Aerial lead through standard dummy antenna	8
1000 k.c.	Aerial lead through standard dummy antenna	8
600 k.c.	Aerial lead through standard dummy antenna	8
15000 k.c.	Aerial lead through standard dummy antenna	2
12000 k.c.	Aerial lead through standard dummy antenna	3.5
9500 k.c.	Aerial lead through standard dummy antenna	5



NOTES on MODEL 56A, 5V DW (semi-bandspread)

Uses large 2 gang, Plessey.

Valves: 6K8 GT
6K7 G
6B8 G
6F6 G
5Y3

BC coils, Ant = R6463, Osc R6467

Notes on MODEL 52S and 56

No paddler on shortwave.

BC coils, Ant = R6441, Osc = R6443

SW coils, Ant = R6442, Osc = R6444 with 30 Ω in series

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47A

PAGE 49 missing..... Model 56

but similar to 525 (Service Bulletin 75)

749 missing
Oct 1997

to model $\frac{56}{2}$

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