

## MODEL 22:

### 5 Valve Broadcast Receiver.

#### 1. General Description.

Model 22 is a standard five valve broadcast receiver. The valves used are as follows:—

- 6K8G Converter
- 6K7G IF Amplifier
- 6B8G Detector AVC and Audio Amplifier
- 6F6G Output Pentode
- 5Y3G Rectifier

#### 2. Alignment Procedure.

This is fully covered in Service Bulletin No. 72 "Standard line up Procedure." The intermediate frequency is 455 k.c. and line up points are 1400 and 600 k.c.

#### 3. Voltage Test.

- D.C. High Voltage sec. of power transformer, from each rectifier plate to centre tag ..... 360
- Heat of Rectifier ..... 5V.
- All other heaters ..... 6.3V.
- Dial Lamp ..... 5V.
- D.C. (Measured between point indicated and chassis)
- 16 MFD Electrolytic Condenser, 1st ..... 350
  - 16 MFD Electrolytic Condenser, 2nd ..... 260
  - Screen of 6K8G and 6K7G ..... 100
  - Plate of 6B8G ..... 60
  - Cathode of 6F6G ..... 17
  - Cathode of 6B8G ..... 1.2
  - Cathodes of 6K8G and 6K7G ..... 3

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

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*note: no power switch*



## MODEL 12: (Continued from P. 2.)

4. Resistance Tests.	Approx. Res. in in ohms.
Across power cord .....	100
Each rectifier plate to centre tag of power transformer secondary .....	600
Across Speaker field .....	2500
Speaker Transf. primary .....	550
I.F. Trans. coils .....	7
Aerial coil primary .....	20
Aerial coil secondary .....	4
Oscill. coil primary .....	2
Oscill. coil secondary .....	3
Between Cathode of 6B8G and chassis .....	2000
Between Cathode of 6K6G and chassis .....	550

### 5. Sensitivity Tests.

(Microvolts input to give standard output  
of 50 milliwatts)

455 k.c.	Grid of 6K7G	2000
455 k.c.	Grid of 6K8G	70
1400 k.c.	Aerial lead through standard dummy antenna	20
1000 k.c.	" " " "	20
600 k.c.	" " " "	20

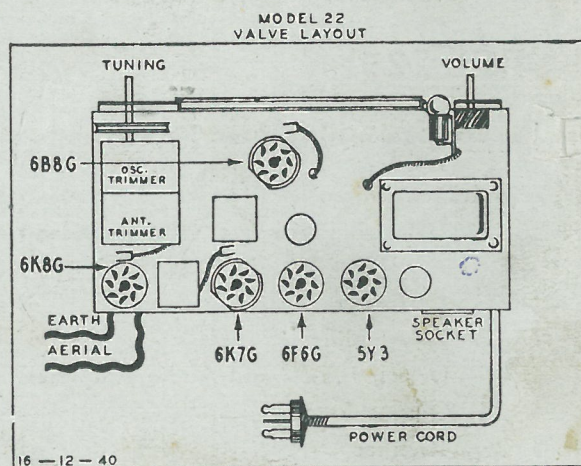
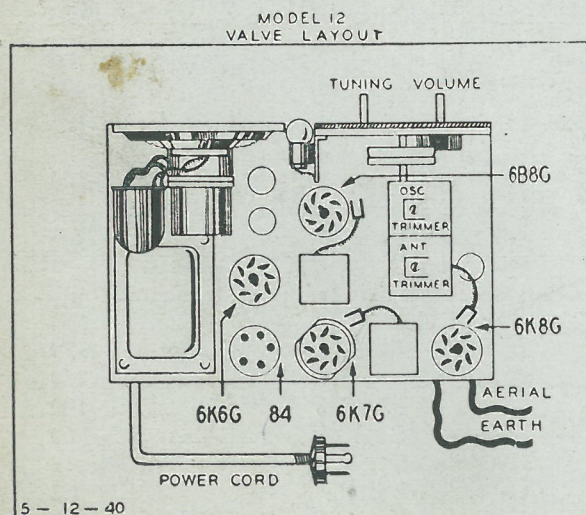
## MODEL 22: (Continued from P. 3.)

4. Resistance Tests	Approx. Res. in in ohms.
Across power cord .....	50
Each rectifier plate to centre tag of power transformer secondary .....	325
Across Speaker field .....	1500
Speaker Transf. primary .....	500
I.F. Trans. Coils .....	7
Aerial coil primary .....	20
Aerial coil secondary .....	4
Oscill. coil primary .....	2
Oscill. coil secondary .....	3
Between Cathode of 6F6G and chassis .....	2000
Between Cathode of 6F6G and chassis .....	450

### 5 Sensitivity Tests.

(Microvolts input to give standard output  
of 50 milliwatts)

Frequency	Input to	Microvolts
455 k.c.	Grid of 6K7G	2000
455 k.c.	Grid of 6K8G	70
1400 k.c.	Aerial lead through standard dummy antenna	15
1000 k.c.	" " " "	15
600 k.c.	" " " "	15







# SERVICE BULLETIN

No. 77  
FEBRUARY, 1941

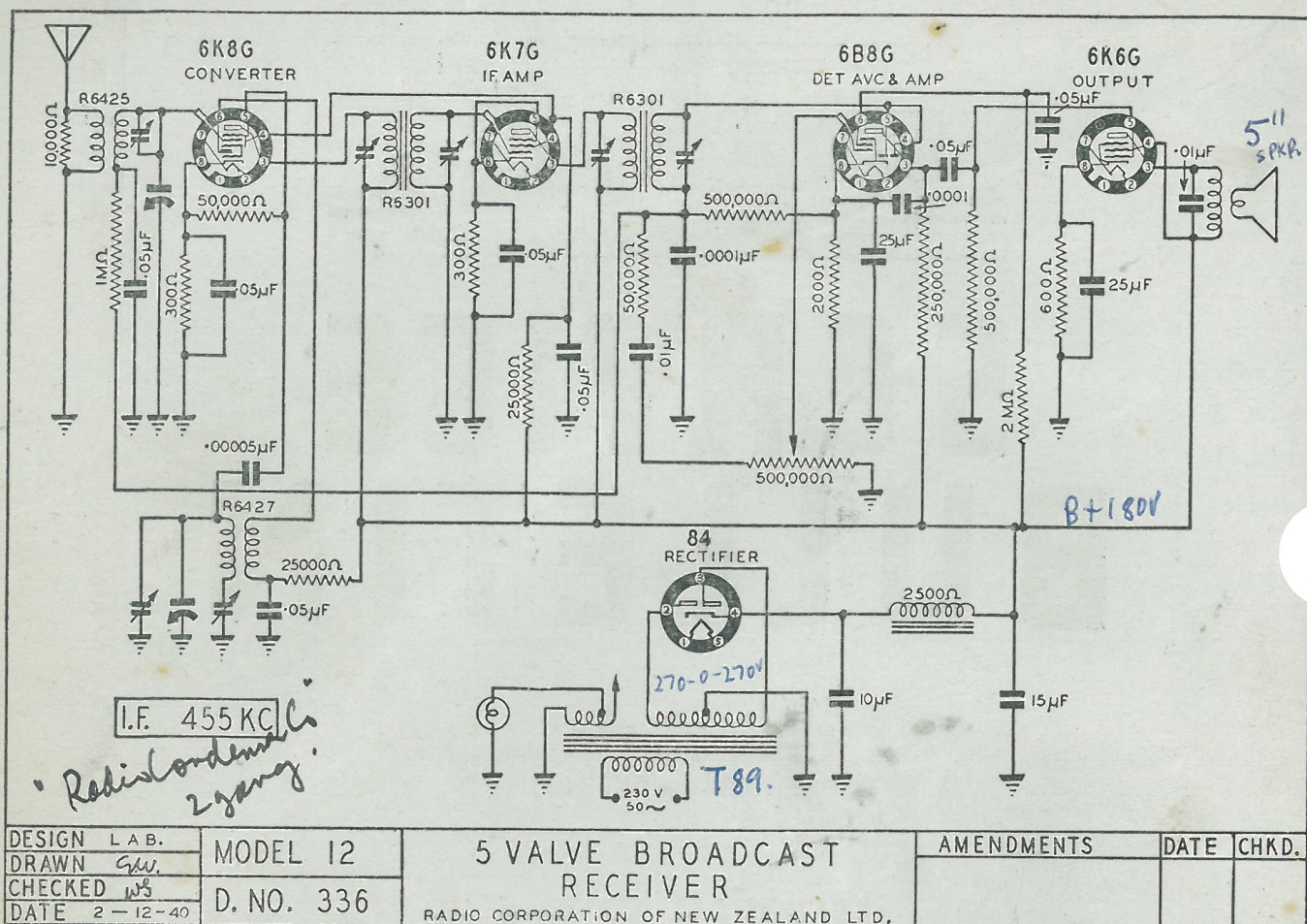
MODELS 12 and 22 *d 022 (Assem Valve)*  
5 Valve Broadcast Receivers.

**R.N.Z.**

RADIO CORPORATION OF NEW ZEALAND LTD.

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





## MODEL 12:

### 5 Valve Broadcast Receiver.

#### 1. General Description.

This is a five valve broadcast receiver built with maximum consideration to limit its physical size without affecting the normal requirements from a standard 5 valve receiver. This has been very successfully accomplished by the use of a small variable condenser, compact electrolytic condensers, small dial, and a 5 inch speaker and an 84 rectifier valve, thus permitting the use of a smaller power transformer.

The following valve types are used:

- 6K8G Converter
- 6K7G IF Amplifier
- 6B8G Detector AVC and Audio Amplifier
- 6K6G Output Pentode
- 84 Rectifier. [This is a five pin valve which can be replaced by its octal equivalent 6X5G.]

#### 2. Alignment Procedure.

This is fully covered in Service Bulletin No. 72 "Standard line up Procedure." The intermediate frequency is 455 k.c. and line up points are 1400 and 600 k.c.

#### 3. Voltage Test.

- A.C. High voltage sec. of power transformer, from each rectifier plate to centre tap ..... 270
- Heater of Rectifier ..... 6.3V.
- All other heaters ..... 6.3V.
- Dial Lamp ..... 5V.

#### D.C. (Measured between point indicated and chassis)

- 15 MFD Electrolytic Condenser ..... 180
- 10 MFD Electrolytic Condenser ..... 275
- Screen of 6K8G and 6K7G ..... 75
- Plate of 6B8G ..... 45
- Cathode of 6K6G ..... 13
- Cathode of 6B8G ..... 1
- Cathodes of 6K8G and 6K7G ..... 2½

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

(Continued on Page 4)

late model 12 (1945)  
 and 6X56T

S/N 11823 was 6X56T

early model 12 used 41 output valve

S/N 20259 = 1944  
 50645 = 1945?



*spare copy of 77*

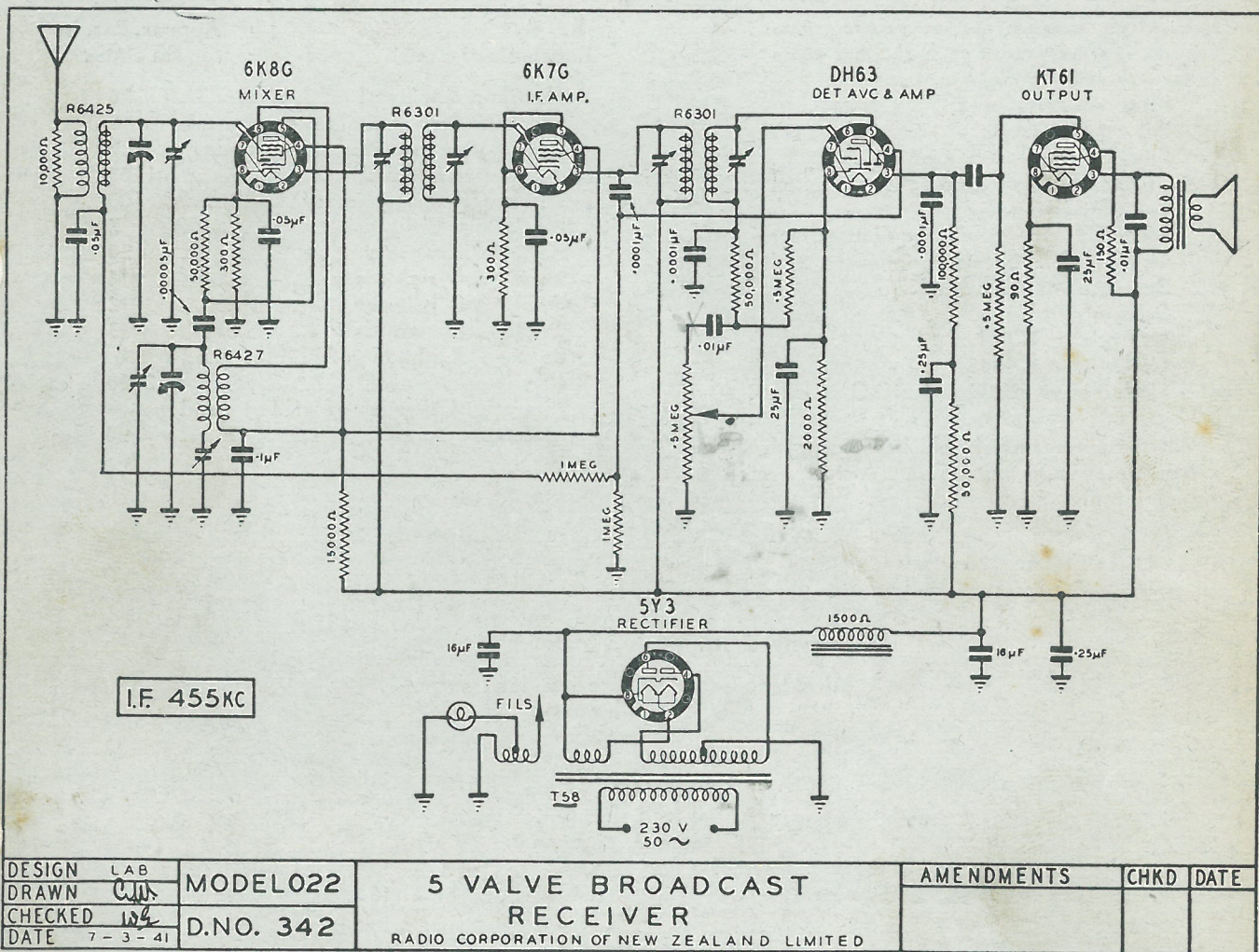
# Supplement to Service Bulletin No. 77 - Model 12+22

**Model 022:**

(Please attach to S.B. No. 77)

1st July, 1941

*Prefix 'O' = OSRAM VALVES*



DESIGN LAB	MODEL022	5 VALVE BROADCAST RECEIVER RADIO CORPORATION OF NEW ZEALAND LIMITED	AMENDMENTS	CHKD	DATE
DRAWN CJA					
CHECKED WJ	D.NO. 342				
DATE 7-3-41					

Please Note that Model 022 differs from Model 22 (D. No. 340) in using:

	Det. A.V.C. & Amp.	Output
Model 22	6B8G	6F6G
Model 022	DH63	KT61

*Prefix 'O' = Osram valves*

Alignment procedure for Model 022, like that for Model 22 should be obtained from S.B. No. 72. Voltage, resistance and sensitivity tests for Model 022 are listed on the reverse side.



# Model O22 (D. No. 342)

## Voltage Test.

D.C. High Voltage sec. of power transformer, from each rectifier plate to centre tag .....	360
Heat of Rectifier .....	5V.
All other heaters .....	6.3V.
Dial Lamp .....	5V.
D.C. (Measured between point indicated and chassis)	
16 MFD Electrolytic Condenser, 1st .....	350
16 MFD Electrolytic Condenser, 2nd .....	260
Screen of 6K8G and 6K7G .....	100
Plate of DH63 .....	60
Cathode of KT61 .....	4
Cathode of DH63 .....	1.2
Cathodes of 6K8G and 6K7G .....	3

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

## Resistance Tests

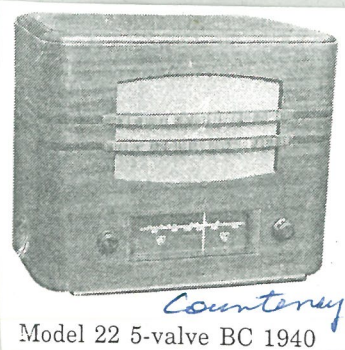
Approx. Res. in  
in ohms.

Across power cord .....	50
Each rectifier plate to centre tag of power transformer secondary .....	325
Across Speaker field .....	1500
Speaker Transf. primary .....	500
I.F. Trans. Coils .....	7
Aerial coil primary .....	20
Aerial coil secondary .....	4
Oscill. coil primary .....	2
Oscill. coil secondary .....	3
Between Cathode of DH63 and chassis .....	2000
Between Cathode of KT61 and chassis .....	90

## Sensitivity Tests.

(Microvolts input to give standard output of 50 milliwatts)

Frequency	Input to	Microvolts
455 k.c.	Grid of 6K7G	2000
455 k.c.	Grid of 6K8G	70
1400 k.c.	Aerial lead through standard dummy antenna	15
1000 k.c.	" " " "	15
600 k.c.	" " " "	15



Model 22 5-valve BC 1940



## MODEL 12 - Differences in later (last) model.

For Model 12-20259 (1942)

- (1) Fitted with Plessey 2 gang.
- (2) Solar metal can filter cap,  $20+20+10\text{ }\mu\text{F}$   
Mounted flat under chassis  
One section used as 6K6 GT. cathode bypass.
- (3) 6K6 GT used instead of "G" type.
- (4) 6X5 GT used instead of 84.



1000

—

II  
De  
Out  
Rec



65

51002 - 23-3-70

CD.

12















MODEL 12 No. 07466

230 VOLTS A.C.  
60 WATTS

AC

WARNING.  
Do not touch any internal part of this machine unless power  
plug or adaptor is withdrawn from the electric supply.  
PRODUCT OF  
RADIO CORPORATION OF NEW ZEALAND LTD



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...and ... territories as ...  
...be administered under ...  
...on of sound broadcast ...  
...ate of domestic use ...  
...any, public or commercial, for ...  
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MODEL

12

No.

07466

230 VOLTS A.C.

60 WATTS

WARNING.

Do not touch any internal part of this machine unless power  
plug or adaptor is withdrawn from the electric supply.

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