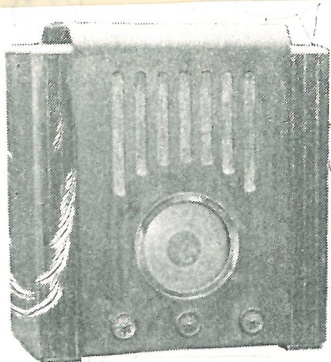


# SERVICE BULLETIN

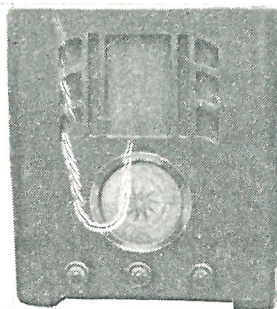
## SERVICE BULLETIN No. 15

September, 1936

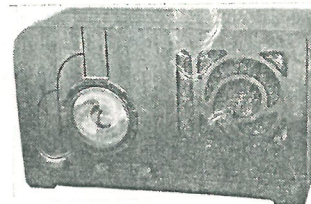
MODEL 5B6: 5-VALVE BATTERY RECEIVER WITH 6-VOLT  
FILAMENT SUPPLY.



CQ 5-valve BC  
model 5B6 1936



Stella 5-valve BC  
model 5B6 1936



CQ 5-valve BC model 5B6 1936

*Pacific  
Courtney  
Columbus  
Stella*

# RADIO CORPORATION OF NEW ZEALAND LTD



# SERVICE BULLETIN No. 15

September, 1936

## MODEL 5B6: 5-VALVE BATTERY RECEIVER WITH 6-VOLT FILAMENT SUPPLY.

1. **GENERAL:** This receiver is a superheterodyne with diode detection and automatic volume control, also with a Class "B" twin triode output, giving maximum output with minimum battery consumption. Its special feature is the use of a 6-volt filament battery, although the valve filaments are two volts only. The series grouping is so arranged that each valve automatically receives its correct grid bias without the necessity for an external bias battery.

The intermediate frequency is 175 kilocycles per second. Owing to the fact that, in the interests of economy, no radio-frequency amplifier is provided, there may be areas where whistles at various dial settings are troublesome. Nevertheless, the high sensitivity and low cost, together with economical running of this receiver, make it a very acceptable model in most battery areas.

The frequency changer is a 1C6 used under its new "economy" conditions, while the intermediate frequency amplifier is the new 1A4 tetrode. Detection and automatic volume control, together with the first audio amplifying stage, is achieved in the new 1B5 duo-diode triode. A type 30 triode drives a 19 twin triode in the conventional manner for class "B" performance.

### 2. ELECTRICAL SPECIFICATIONS:

Filament supply	6 volts, approx. .42 amps.	
High-tension supply	90 volts, approx. 10 MA.	
Undistorted power output	Approx. 300 mW.	
Valves used	Frequency changer	1C6
	I.F. Amplifier	1A4
	Detector-amplifier	1B5
	Audio amplifier	30
	Output class "B"	19
Intermediate frequency	175 kc./sec.	
Broadcast band	550-1500 kc./sec.	
Line-up frequencies	Intermediate frequency	175 kc./sec.
	Broadcast band	600 and 1400 kc./sec.

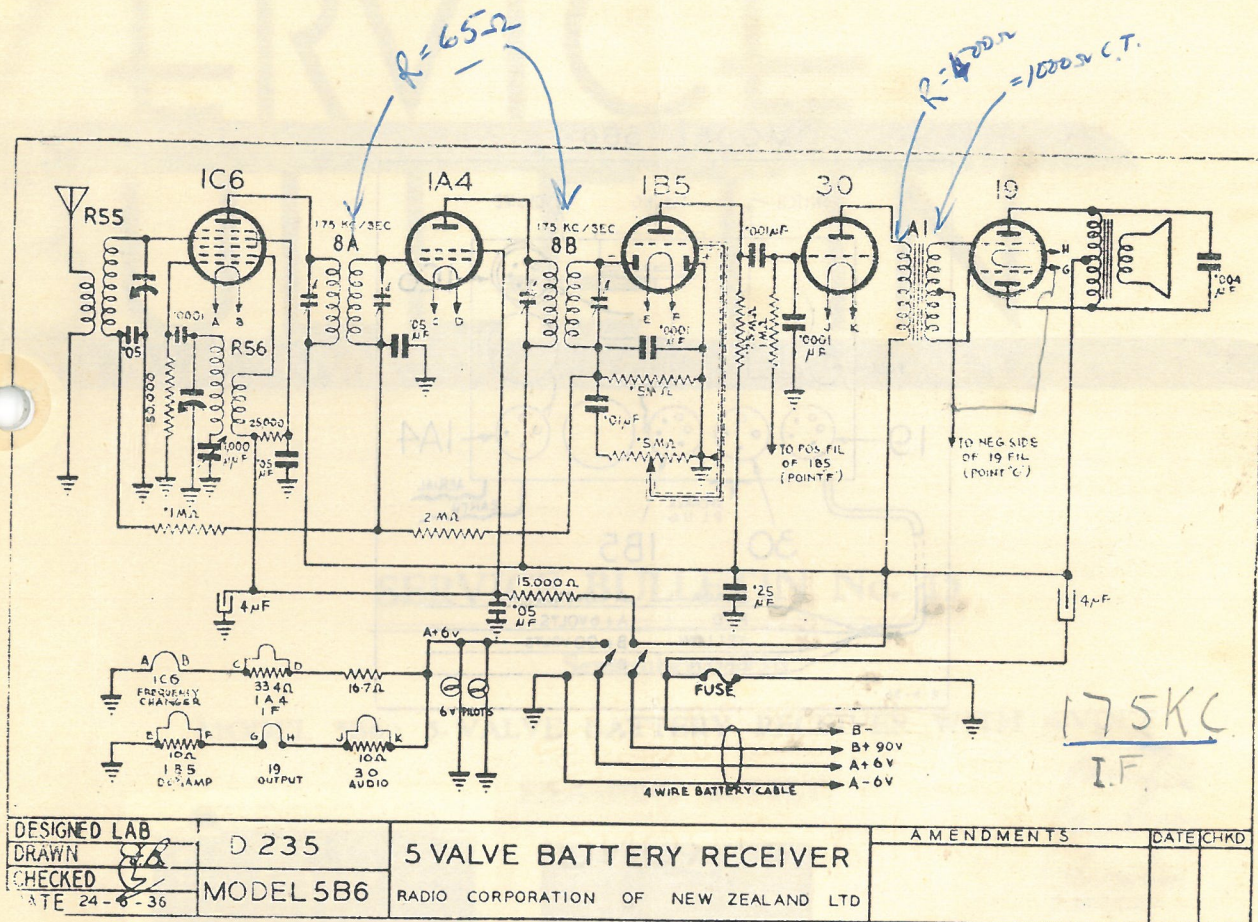
### 3. VOLTAGE TESTS:

Filament battery voltage	6 volts			
High-tension battery voltage	90 volts			
Filament voltages	Approx. 2 volts			
Other voltages to ground, using 1000 ohm. per volt meter on 100 volt range:—				
Valve.	Function.	Plate.	Osc. Plate.	Screen.
1C6	90	90	50	30
1A4	I.F. amp.	90	—	30
1B5	Detector-amp.	20	—	—
30	Audio amp.	90	—	—
19	Output.	90	—	—

### 4. RESISTANCE TESTS:

Coil.	Where Measured.	Resistance in ohms.
Speaker input tran.	Plate to plate of 19.	550
Audio tran. secondary	Grid to grid of 19.	800
Audio tran. primary	See Circuit.	380
1st I.F. primary	See Circuit.	65
1st I.F. secondary	See Circuit.	65
2nd I.F. primary	See Circuit.	65
2nd I.F. secondary	See Circuit.	65
Antenna coil primary	Aerial to ground.	(Short Circuit) ? 5 1/2 Ω
Antenna coil secondary	See Circuit.	(Short Circuit) 10
Oscillator primary	See Circuit	(Short Circuit) 5
Oscillator secondary	See circuit.	5 → 1 1/2 Ω





**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 may be obtained on application to the Engineering Department if desired.

Frequency.	Grid of 1A4 I.F. amp.	Microvolts.
175 kc./sec.	Antenna through standard "dummy."	20,000
175 kc./sec.	Antenna through standard "dummy."	200
1400 kc./sec.	Antenna through standard "dummy."	20
1000 kc./sec.		30
600 kc./sec.		90

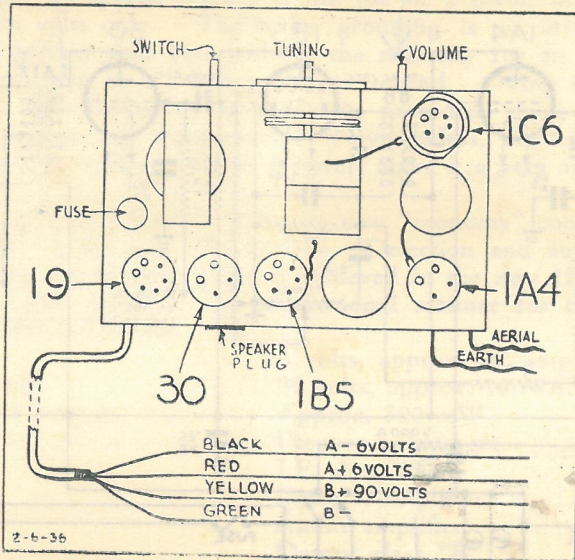
**7. GRAMOPHONE CONNECTIONS:** Under some circumstances it may be desired to operate a gramophone pick-up with this receiver. The circuit is shown and described in Service Bulletin No. 13, "Gramophone Attachment to Standard Model Receivers." The only parts necessary are one D.P.D.T. switch, one pick-up jack (or two terminals), and the requisite length of twin shielded wire. This Bulletin is obtainable on application to the Engineering Department, and at a nominal charge.



# SERVICE BULLETIN No. 12

MODEL 5B6, 5 VALVE BATTERY RECEIVER WITH AERIAL  
FRAGMENT SUPPLY

## MODEL 5B6



## 5 VALVE BATTERY RECEIVER

RADIO CORPORATION OF NEW ZEALAND LTD

MODEL 5B6

LINE-UP PROCEDURE: This is fully explained in the Engineering Department's Bulletin No. 12, Standard Line-up Procedure for Multi-wave Receivers. A copy of which may be obtained on application to the Engineering Department is described.

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

Frequency	Antenna through standard "dummy"	Grid of 1A4 I.F. amp.
175 kc/sec.	10,000	100
175 kc/sec.	100	10
1400 kc/sec.	100	10
1000 kc/sec.	100	10
600 kc/sec.	100	10

GRAMOPHONE CONNECTIONS: Under some circumstances it may be desired to operate a gramophone pick-up with this receiver. The circuit is shown and described in Service Bulletin No. 12, "Gramophone Attachment to Standard Model Receivers". The only parts necessary 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 at a nominal charge.