

*Stella Model 511*

## TECHNICAL INFORMATION

BULLETIN No. 129

(TYPE)

TECHNICAL DESCRIPTION OF

"STELLA" MODEL 515 BATTERY RECEIVER.

### RECEIVER

COLLIER & BEALE LTD.

WELLINGTON

*LF. 456 KC*

TECHNICAL DESCRIPTION OF  
"STELLA" MODEL 515 BATTERY RECEIVER.

This Model Receiver uses five of the new 1.4-volt series valves in a standard Superheterodyne circuit. The tubes used, and their functions are :-

- 1 - Type 1N5-G Radio-frequency amplifier
- 1 - " 1A7-G 1st Detector and Oscillator
- 1 - " 1N5-G I.F. Amplifier
- 1 - " 1H5-G Diode Detector and 1st Audio amplifier
- 1 - " 1A5-G Output Amplifier

The circuit is entirely conventional, the only departure from standard battery-receiver practice being the elimination of the "C" battery, and the provision for automatic bias being obtained in the Receiver Unit.

A very high order of efficiency is realised from the use of the new valves, and entirely satisfactory performance can be obtained with high-tension battery potentials as low as 60-volts, and under these circumstances a total receiver "B" battery consumption of the order of  $5\frac{1}{2}$  to 6-milliamperes is obtained. Maximum performance, however, can be realised with a high-tension battery not exceeding 90-volts and under these conditions the total consumption is of the order of 7.5-milliamperes. The filament current requirements are also extremely modest, being only .25-amperes at 1.4-volts for the entire Receiver. Filament power may be satisfactorily obtained from a single dry cell, or if the Receiver is to be used for long periods at a time, a battery of two or more No. 6 cells connected in parallel, will prove more economical. The battery requirements both filament and high-tension are now sufficiently modest to enable them to be accommodated without difficulty in the average mantel cabinet.

A blue-print showing the circuit details and values of all components fitted, is attached hereto.

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COLLIER & BEALE LIMITED,  
66 CHUZNEE STREET,  
WELLINGTON, C.2.  
2nd March, 1939.  
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### RESISTORS.

- R-1 1-meg. Plate-load, 1st Audio-amplifier
- 2 1 " A.V.C. Filter
- 3 .5 " Volume-control
- 4 .5 " A.V.C. Filter
- 5 .5 " Diode load
- 6 .5 " Tone-control
- 7 .25 " Oscillator Grid Leak
- 8 50,000-ohm. Screen Dropping
- 9 500-ohm. "C" Bias Dropping

### CONDENSERS.

- C-1 25-mfd. "C" Bias-supply, audio by-pass
- 2 .25 " Filament By-pass
- 3 .1 " High-tension by-pass
- 4)  
5) .05 " A.V.C. Filter
- 6 .01 " Audio-coupling
- 7 .01 " " "
- 8 .01 " Screen By-pass
- 9 .001 " Audio-frequency By-pass
- 10 .0001" Audio By-pass
- 11 .0001" Tone Control
- 12 .0001" Diode Load By-pass
- 13 .0001" Oscillator grid
- 14 550-mmfd. Padding



- C-15)  
    ) Capacative coupling, arranged integral with  
16) coil assembly.

SWITCHES.

- S-1)  
    ) Combined with Volume Control.  
2)

FUSES.

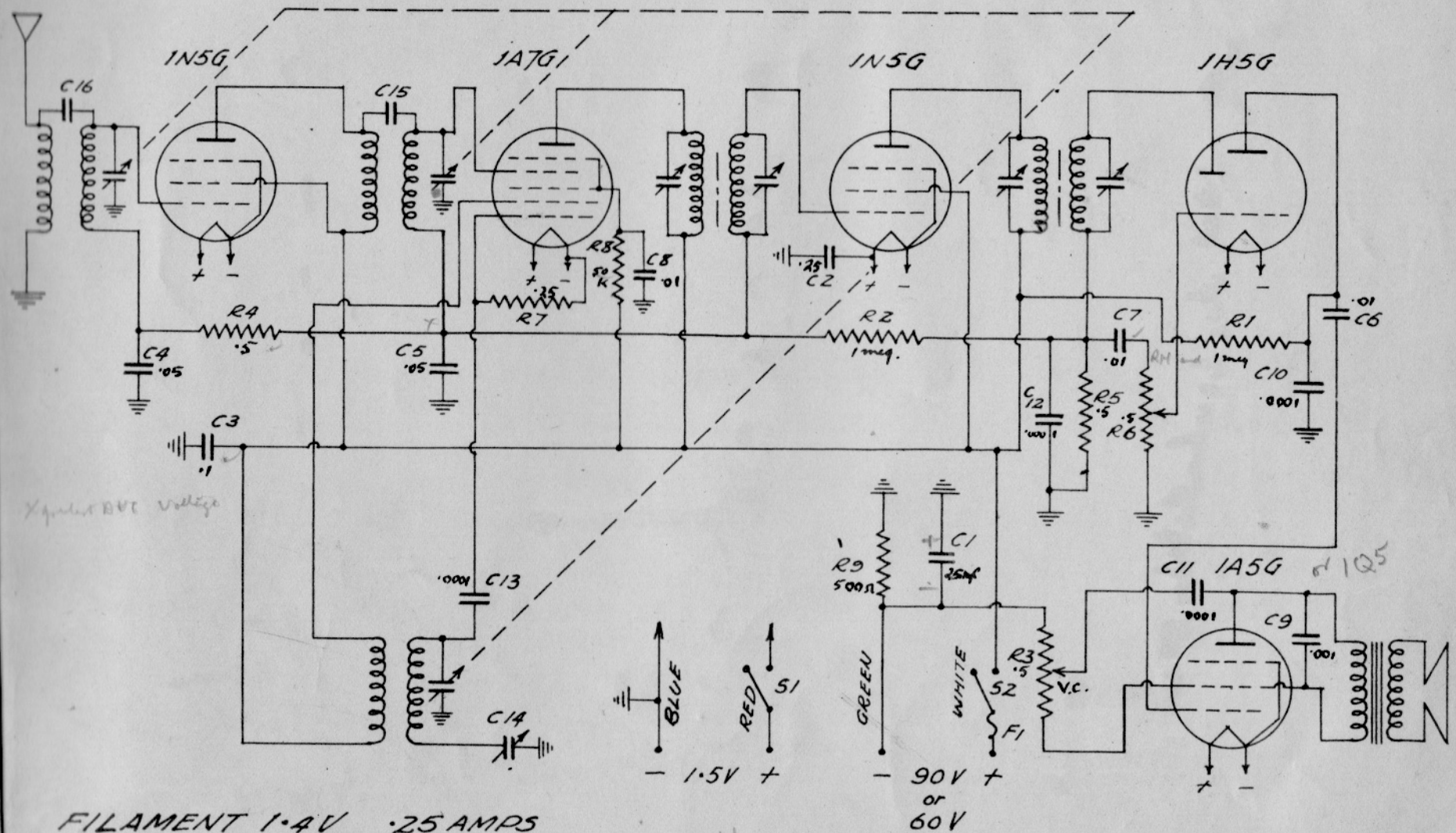
- F-1 High-tension Fuse 100-m.a.
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# SCHEMATIC WIRING DIAGRAM MODEL 515 BATTERY RECEIVER.



FILAMENT 1.4V .25 AMPS  
H.T. 60/90V. 6/7.5 M.A.

Fuse 250 milli

