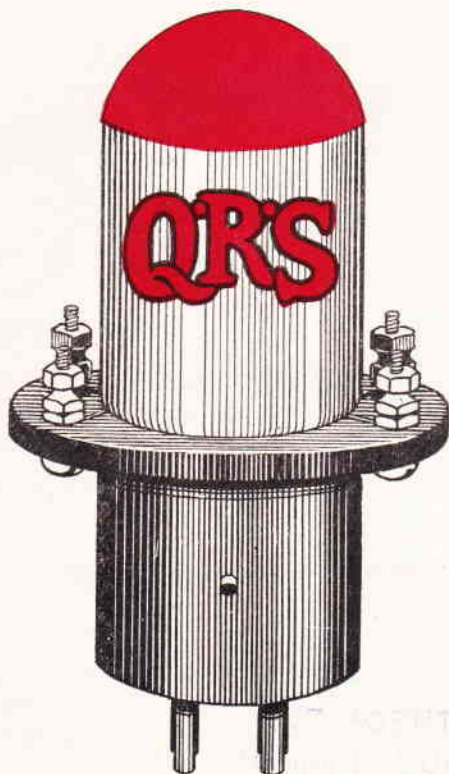


# Q·R·S *Redtop* POWER TUBE

Satisfaction  
Guaranteed or Money  
Refunded



DOUBLE FILAMENT  
DOUBLE GRID  
DOUBLE PLATE  
CLEAR RECEPTION  
MORE VOLUME  
**A DIFFERENT TUBE**

PRICE

**\$4.50**

## THE Q.R.S MUSIC COMPANY

CHICAGO      NEW YORK      SAN FRANCISCO      TORONTO

*Executive Offices, 306 South Wabash Avenue*  
CHICAGO, ILLINOIS

Printed in U.S.A.

# There is a Reason Why *Redtops* are Better

## Design and Construction

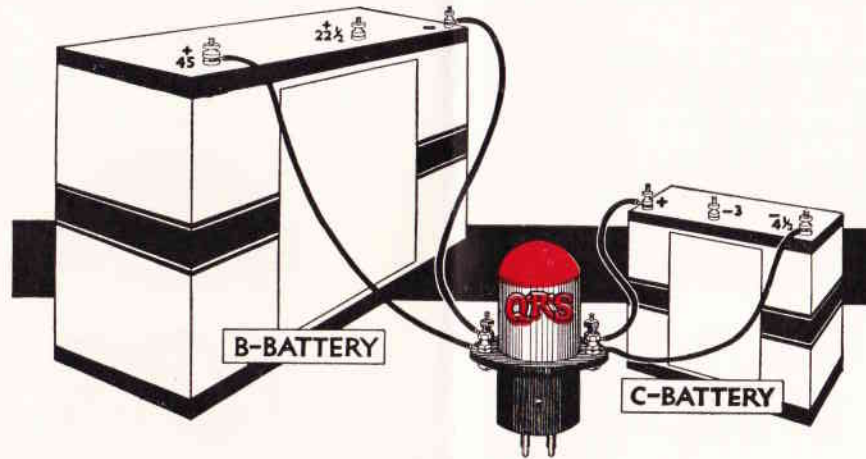
The design and placing of the three fundamental elements in the Redtop tube are perfectly symmetrical, thereby allowing no opportunity for escape of the electrical energy.

The construction of the Redtop tube eliminates vibration. Anchored supports at both the top and the bottom are the reasons.

This construction makes Reception **clearer** as it does away with tube noises and brings in purer tone quality.

All the interior elements are thoroughly anchored and welded together which keeps the relative spacing of the parts uniform under all ordinary conditions of shipping and use, promoting reliability and uniformity.

Inspections during construction and on completion are thorough and rigid. This means **every** tube is inspected four times before it receives our seal of approval, which is the application of the redtop coloring.



DIAGRAM

This diagram shows how to connect the additional B and C batteries to the Power Tube. The reason these extra batteries are connected directly to the Power Tube only is to prevent the extra voltage from passing through the other tubes in the set.

## Instructions for Use

In radio sets already adapted to a power tube, that is, a set that has independent or separate B and C battery binding posts or lead wires on the last audio tube, making it possible to add more B and C voltages to the last tube only, the REDTOP Power Tube is used without any connections to the Power Tube itself. Just insert the tube in the last audio socket and add the additional batteries, attaching them to the independent binding posts or lead wires on the set.

In sets not already adapted to a power tube, that is, a set that has only one amplifier B battery binding post or lead, making it impossible to add more batteries without increasing the voltage on all tubes, the REDTOP Power Tube can be used without changing any connections in the set by means of the special base on the tube. Remove the strip of metal connecting the binding posts on the tube base, add the additional B and C batteries directly to the correct binding posts as marked (see diagram), care being taken to

see that the minus and plus terminals on the batteries are connected to the minus and plus terminals as marked on the base of the tube.

To get the maximum results from the Q.R.S REDTOP Power Tube, a B battery voltage of 180 volts and a C battery voltage of 22½ volts is recommended.

If your set is equipped with 90 volts B battery, an additional 90 volts B battery is required. The same ratio applies to C batteries as per schedule of values on the label of the box.

### CAUTION:

This REDTOP Power Tube is for use only in the last stage of an audio-frequency amplifier. Use recommended filament, grid and plate voltages. Filament should be always operated at lowest voltages which will give satisfactory results.

### PATENTS AND TRADE MARKS

The name **Redtop** is registered in the U. S. Patent Office as a Trade Mark. The tube is manufactured under license under patent application pending. It is licensed for commercial, amateur and experimental use without restriction after sale.

**Q·R·S Redtop**  
REG. U.S. PAT. OFF.

Power Tube

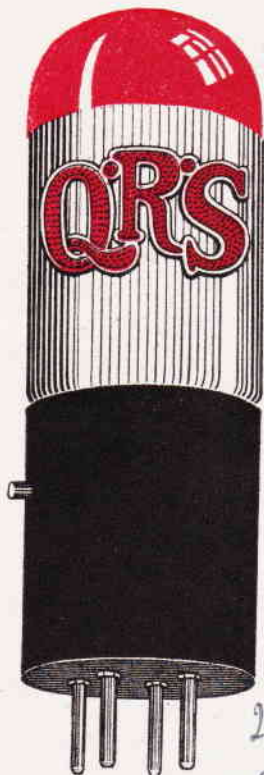
Standard ½ Ampere Power Type—Patents Applied For  
Filament Volts.....5. Filament Amperes.....0.5 Maximum Plate Volts.....180

N. Z. AGENTS:

Norman E. BURNELL & Co., Pty., Ltd.

AUCKLAND

Satisfaction  
Guaranteed or Money  
Refunded



*201 A TYPE.  
5/3000  
+ Stock.*

**A DIFFERENT TUBE**

**DOUBLE FILAMENT**

**DOUBLE GRID**

**DOUBLE PLATE**

**CLEAR RECEPTION**

**MORE VOLUME**

PRICE

**\$2.00**

**THE Q.R.S MUSIC COMPANY**

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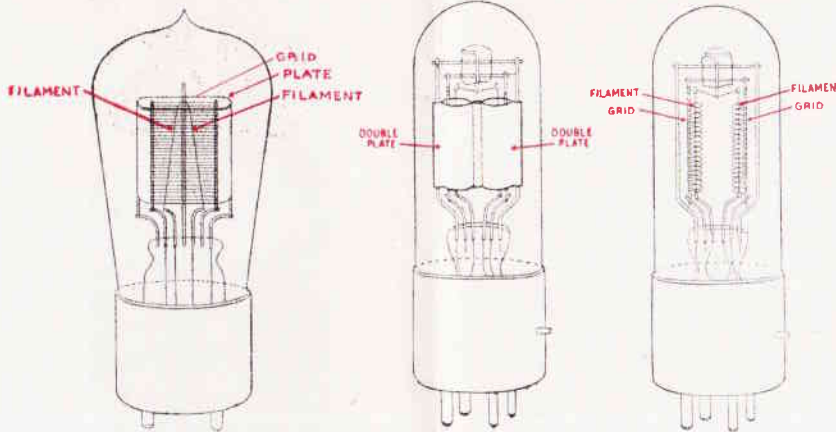
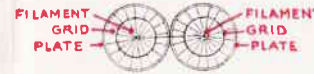
### In the ordinary tube, note:

Confusion in emission and control electrons. A muffled tone is the result. The electrons interfere with each other.



### In the Redtop tube, note:

Perfect symmetry in emission and control of electrons. A clear tone is the result.



## Instructions for Use

Filament or "A" battery is best of 6 volt storage type, especially if more than one tube is used, although 4 dry cells in series for one tube will ordinarily give 60 to 70 hours service before becoming exhausted.

A rheostat should be used of 25 to 40 ohms resistance when controlling one tube. For controlling more than one tube this resistance can be cut down proportionally.

In the detector circuit, as this tube has a high vacuum, or is "hard," frequently best results will be obtained with plate or "B" voltage as high as 45. The most efficient voltage should be determined by trial of the particular set.

In the amplifier circuit 90 volts are found to be generally satisfactory, as greater amplification occurs with the higher voltage. Greater life of filament and usually purer tone are obtained by burning the filament at the lowest temperature giving satisfactory results. However, when a 6 volt battery is used, the filament will not be damaged at full voltage.

## CAUTION

Before changing wires about the set or making connections to batteries, remove tubes from sockets. Disconnect batteries before making any adjustments or changes with pliers or screw driver in the set.

Be particularly careful not to permit plate voltage to be applied accidentally to filament circuit. No adjustments are allowed for burned out filaments.

## PATENTS AND TRADE MARKS

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**Q.R.S Redtop**  
THE VACUUM TUBE

## Detecting and Amplifying Vacuum Tube

Standard  $\frac{1}{4}$  Ampere Type—Patents Applied For

Filament Volts.....5. Filament Amperes.....0.25 Plate Volts.....45 to 135

**NORMAN L. BURNELL & CO. LTD.**  
**208 Smith's Building, Albert Street,**  
**Auckland.**



## Q.R.S REDTOP DETECTOR TUBE

<b>Filament Volts</b> . . . . .	<b>5</b>
<b>Filament Amp.</b> . . . . .	<b>0.25</b>
<b>Plate Volts</b> . . . . .	<b>22½-45</b>

The Q.R.S Redtop Detector Tube has greater sensitivity than other detector tubes, especially noticeable on distant reception or weak signals.

This tube will operate perfectly on all regular detector circuits without any change of adjustment in your set.

You will find you will get best results with 45 volts on the plate, tho for distant reception 22½ volts will give surprising performance.

The Q.R.S Redtop Detector Tube is absolutely guaranteed and any defective tube will be replaced at the place of purchase.

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### IMPORTANT NOTICE

To avoid the risk of burning out the filament when placing tubes in, or removing them from socket in set, always disconnect B Battery connection.

*Price \$4.00*

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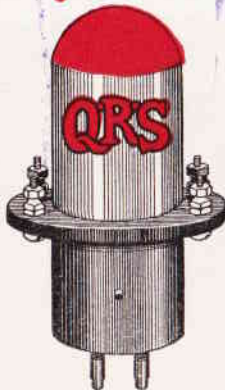
# Q.R.S. Redtop Radio Tubes are better



Super Detector

\$4.00

Gives more signal strength than any other Detector Tube on the market.



Power Tube

\$4.50

Gives more volume with less distortion.



201-A Type

\$2.00

The Best Radio Tube on the market.

N.Z. AGENTS:

Norman L. BURNELL & Co., Pty., Ltd.

AUCKLAND.

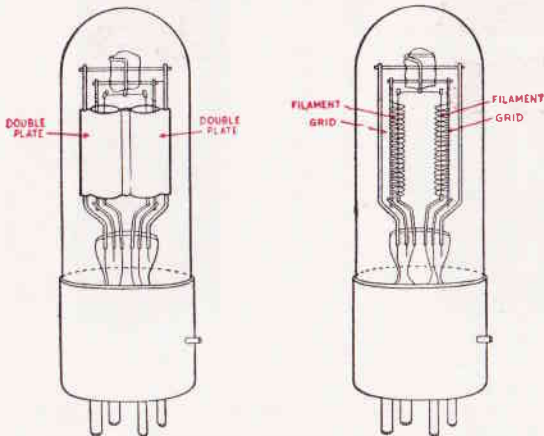
**Fully Guaranteed**

All Double Filament, Double Grid and Double Plate.



# NOTE THE DIFFERENCE

Two tubes in one bulb—  
Consumes no more current



**CLEARER RECEPTION—BETTER TONE QUALITY**

You will never know how good your set is  
until you use better tubes

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The Q.R.S. Redtop Super Detector Tube is a real wonder. We have many testimonials on its efficiency.

American Radio Relay League operator, Knaack, of Station 9-UY, says—"I hear stations I never heard before—get about twice the volume on DX signals—gives as much signal strength as a regular Detector and one stage of amplification—certainly is great to get the present reception."

You will never know how good your set is until you use a Q.R.S. Redtop Super Detector Tube.

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