



# This high frequency tube meets the amateur's severest test

The Western Electric 254B is a screen-grid tube for use as a radio-frequency power-amplifier and as a harmonic-generator at intermediate power levels at high frequencies. The thoriated tungsten filament is of spiral design to keep internal impedance low and constant during the life of the tube. The mechanical structure of the 254B has adequate strength to meet severe usages.

This tube will prove more satisfactory than other tubes of comparable size which have been available and which are usually used in present circuits by amateurs.

The following are the characteristics of the 254B:

Filament Voltage.....	7.5
Filament Current, Amperes.....	3.25
Maximum Plate Voltage.....	750
Maximum Plate Current, Ampere.....	0.075
Maximum Plate Dissipation, Watts.....	25
Screen-Grid Potential, Volts.....	150
Average Amplification Factor.....	100
Average Plate Resistance, Ohms.....	75,000
Average Mutual Conductance, Micromhos.....	1,330
Approximate Direct Interelectrode Capacities:	
Plate to Control-Grid.....	0.085 Mmf.
Plate to Filament and Screen-Grid.....	5.4 Mmf.
Control-Grid to Filament and Screen-Grid.....	11.2 Mmf.
Maximum Overall Length.....	6-15/16"
Diameter of Bulb.....	2-7/16"

For booklet describing this and 25 other Western Electric tubes for use by licensed amateurs, write to Graybar Electric Co., Graybar Building, New York, N. Y.



## Western Electric

RADIO TELEPHONE BROADCASTING EQUIPMENT

Distributed by GRAYBAR Electric Co.

2. If there is an abundance of modulator power, causing overmodulation, the carrier power could be increased, and still at 100% modulation, thus giving greater range.

3. Another fault, akin to overmodulation in results, is overexcitation of the modulator, causing harmonics of speech frequencies. This causes the worried-over "quality" to be distorted and reduces effective readability, thus reducing effective range.

From these points, I draw the conclusion that the amateur encourages inefficiency when he overexcites modulators or overmodulates. . . .

—R. S. Sutcliffe, W2DKA

## Right You Are!

1822 Battery, Little Rock, Ark.

Editor, *QST*:

What a hobby!! What a hobby!!!

When a man like Frank Hawks puts it down in black and white that he was "thrilled beyond words" it is really something.

Not even the setting of his numerous air speed records evoked such an exclamation.

Guess I had better quit wishing I were an aviator and hit the old key a little harder.

—Bill Stewart, W5MU

## Strays

One of our contemporaries describes a dynatron oscillator tube with two electrons. One primary and one secondary, we suppose, bouncing back and forth between plate and grid to produce oscillation.

## Tube Base Chart Available

If you are perplexed by what socket connections go with which of any of the numerous gadgety tubes that now afflict us, you will have use for a handy chart that shows the elements and prong connections for all types. The chart is of the wall type and includes two tables for reference. One lists the base arrangements by tube types, the other the tube types by base arrangements. The chart may be obtained free by writing Hygrade Sylvania Corp., Emporium, Pa.

## The Bandsetter

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Ordinarily, simply twisting the insulated coupling wire from the bandsetter around the receiver antenna lead will give more than sufficient signal. However, if for any reason greater strength is desired, a coupling condenser of 3 to 5  $\mu\text{fd.}$  capacitance should be made and one electrode connected to the high side of the r.f. or detector tuned input circuit. The other electrode is connected to the coupling wire. About two inches of twisted hookup wire, or a two-plate condenser of brass angle such as used for antenna coupling on the old receiver, will be correct.