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## The High-Vacuum Tetrode as a Thyatron

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## A GENERAL OUTLINE OF A UNIVERSAL FREQUENCY METER

D. O. MCCOY AND G. W. FOX

Some of the considerations encountered in the design and construction of a universal frequency meter will be presented. The standard frequency is generated by the use of a 100,000 cycle AT cut quartz crystal plate. The method used in producing this plate will be described.

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## THE HIGH-VACUUM TETRODE AS A THYRATRON

R. D. HUNTOON

A circuit is described wherein the ordinary tetrode or screen-grid vacuum tube when operated as a Dynatron exhibits the characteristics of a Thyatron or gas-filler triode.

The method of determining the circuit constants and details of operation are given. Several simple applications such as quiet automatic volume control for radio receivers, "scale" counters, and sweep circuits are outlined.

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## RESISTIVITIES OF ALLOY SINGLE CRYSTALS

H. E. WAY

A somewhat systematic attempt is being made to study the effect on electrical resistivity of zinc of small amounts of dissolved metallic impurities. In order to do this sets of single crystals have been made, each set containing a known percentage of some one impurity. The resistivities and some temperature coefficients of resistivity have been measured. The resistivity results include at the present data on sets of crystals containing 0.125, 0.25, 0.50 per cent of copper, gold, or silver, and 0.005% and .01 per cent iron. In all cases the resistivity increases with increase of added