

Tube of the Month

de Forest OSCILLION

When de Forest was trying to develop his first triode tubes, they were intended to be used as sensitive detectors. These were the days of spark and arc transmitters. The idea that a couple watts of CW would do a better job hadn't been possible until the vacuum tube was developed. While trying to make the audion amplify, an accidental feedback loop occurred that made a "howling" noise at audio frequencies. He later referred to this effect as "singing" and tried to make "singer" tubes for use in musical instruments. Tubes designed to oscillate were called "oscillions" and this name would be used for some years for de Forest's transmitting tubes. In WW1, the use of CW was developed using free running oscillators.

After the end of WW1, de Forest had the legal right to produce transmitting tubes and made a series of high power oscillions. These were usually 250 and 500 watt dissipation versions. The tubes were designed to operate in vertical breadboard transmitters with the tubes being clamped to the board and connected with long leads. By 1920, de Forest started putting bases and anode caps on these tubes as had become a common practice at GE and Westinghouse. The oscillions were made by skilled glassblowers and the internal support structures are very delicate. The tubes are rare today as they were easily broken. The second example has better support structure and leads out the side. Later versions with base fixtures had internal structure like the second tube, but with leads out the bottom and a top anode cap.

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