

Tube of the Month

861

Tubes from WWII that have increased the most in value are usually types that are useful as audio amplifiers. The 861 or VT19 is an exception. It is a 400 watt dissipation tetrode that was first produced in 1929. It is capable of operating up to 20 MHz at full power. Most tubes in 1929 couldn't do that. During the 1930s, the U.S. military was designing equipment that was eventually used during WWII. The 861 was used as the final amplifier in a series of very large and heavy Navy transmitters like the TAJ, TBK and TBM. These transmitters had typical outputs of 500 watts and weighed 600 pounds. Not that bad if the power supply was included, but this was just the transmitter. It needed a motor generator that supplied all voltages that probably weighed more. A 5 HP motor drove the generator. If you wanted AM, you needed a speech amplifier and modulator that were almost as large.

There is a group of amateurs that like collecting and operating this old military gear on the ham bands. A large radio room and fork lift are useful. The 861 tubes are now in demand as many of the old tubes have become gassy after 70 to 80 years. I don't think they have made any new ones since the end of the War when surplus tubes were very easy to find.

The 861 uses a "250 watt" socket assembly and has the grid out the top and the plate out the side. The extra side connection is for the screen grid. Overall length is 17.22 inches. In use, the tube was inverted from how this example is shown. Inverting the tube shortened the grid lead and kept it away from the plate.

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