

Tube of the Month 813

With the introduction of tetrode and pentode amplifier tubes, transmitter circuitry was greatly simplified. Fewer driver stages were needed that had been required in the older all triode transmitters. Tubes like the Raytheon RK-20 were intended for ham use and RCA's 803 seemed to fill a military application. The 803 was large but only handled full power below 20 MHz. This was no problem for military transmitters that were mostly used at lower frequencies for security reasons.

In 1938, RCA came out with the 813 and it was highly advertised in amateur publications. It was a 125-watt beam pentode that could be used all the way to 10 meters with low drive requirements. A pair of 813s would handle a legal KW input. The popularity of the new tube in ham rigs wouldn't take off until after WWII. Money was tight in 1938. The new tube fit several military applications. In preparation for the probable war, heavy bombers were being designed like the B-17. The 813 was used in the famous auto tuned ART-13 aircraft transmitter. After the War, the 813 was available to the hams in large numbers and many ham publications featured amplifiers and transmitters using the 813. The ARRL Handbook ran an article featuring single band, parallel 813s for several years. I also had single band 813s, but mine were all push pull. The 813 could also operate as a grounded grid amplifier by jumpering the grids together. The 813 is still a common amplifier tube for the first time builder. The Japanese call it the 4B13 and the Europeans call it the BB2/250E.

Visit the museum at N6JV.com
Norm N6JV

