

Tube Of The Month

807

High power tetrode tubes had been in service since the late 1920s. Under certain circumstances, like during tune up, secondary emission from the plate could effect the screen grid and cause erratic operation. The screen grid current could go negative. With the pentode tubes like the RK-20, the extra “suppressor” grid prevented this. In 1936, RCA came out with the “beam” power tetrode. Instead of an actual grid as a suppressor, they aligned the control and screen grids and added a pair of deflector plates. The secondary emission was solved and the power handling capability was increased. This tube was the metal 6L6. To this day it has still not been resolved as to the designation of the beam tube as a tetrode or a pentode.

RCA wanted an actual transmitting tube to use this design, so in 1937 the glass 807 was introduced. It would operate at full ratings to 60 MHz unlike the 6L6 that died at 20 MHz. The low driving power characteristic of the 807 made it a big success. RCA made a 12-volt filament version called the 1625. The military quickly incorporated the 1625s into their new aircraft. A pair of 1625s could be driven by a low power VFO and their 12-volt filaments could be run in series for operation directly from the aircraft’s 24-volt power system. Additional 1625s were used as the modulator. The ARC-5 transmitters were made in great numbers and are still a collector’s item today.

Before and after WWII, the hams loved the 807. They were used as RF and audio amplifiers in many QST articles. Many commercial ham rigs used both the 807s and the 1625s. After the war, 1625s were available surplus for 25 cents. It is one of the few tubes that became part of ham slang even today. Going QRX to get a beer is still called “getting a cold 807”.

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