

Tube Of The Month

15E

At the beginning of World War II, the need for RADAR equipment stimulated the development of many specialized tubes. The large ring oscillators used in ship and shore installations weren't usable on small aircraft. EIMAC had been making small transmitting triodes like the 35T since 1935. About 1938 they made a few UH-15 tubes. No data on that tube has been found. It was very short and had the grid out the top and the plate out the side. The 15E looks like a baseless UH-15. The 20-watt 15E was produced in large numbers and were used in airborne RADARs like the ASB and in IFF (Identification Friend or Foe) units like the BP unit shown in the photo. These tubes could operate up to 600 MHz and in pulse service, operate on 15,000 volts as an oscillator or pulse modulator. Very small but powerful transmitters could be made like the BP that was a tuned filament, tuned grid and tuned plate oscillator. When the aircraft's receiver detected a RADAR search pulse, it would answer with a coded pulse basically saying, "don't shoot me". Pilots were highly motivated to make sure the IFF was properly serviced.

Small rectifiers were also made in this envelope and were designated the 15R and used in some of the same equipment as the 15E. After the War, hams could buy these tubes cheaply, but they were never widely used. Tubes with bases were easier to mount and replace. Recently I found an advertisement where someone was using 15E tubes to make "night-lights".

Visit the museum at N6JV.com
Norm, N6JV



