

## NT100 / CV1257 - Tetrode, Radar Pulse Modulator



GEC power tetrode was designed as pulse modulator to drive the CV38 magnetron in airborne S-band radar. It was an external anode power tube which relied upon the huge experience that GEC had gained with the 1920s CAT and then the 1930s CATKIN metal-glass families. From the Lord Paterson's diary we learn that the E1155 - the GEC developmental code for the NT100 - as of early February 1941 was in progress to enter production. Forced-air cooling, with Integral finned radiator, four pin large base. Indirectly heated, oxide-coated cathode.

- 8 V at 6 A heater
- **12 A minimum emission**
- 1 kV max anode voltage
- 60 W anode dissipation

NT100 had been designed as driver for the [CV38](#) unstrapped magnetron. It was used early in 1942 in the pulse modulator of the AI MKIII radar set, driving the **CV64**, the first 'echelon' strapped magnetron. From the mid 1942 the NT100 was replaced by the **CV85** trigatron switch, resulting in a pulse power increase from 40 kW to 160 kW.

Even if no design details have been found, the large current required to operate the heater leads us to believe that there are two or even more cathodes inside, maybe in order to increase the emitting surface so to grant the specified emission: give a look to the WE modulator tubes **715A to C** with four in-line cathodes.

