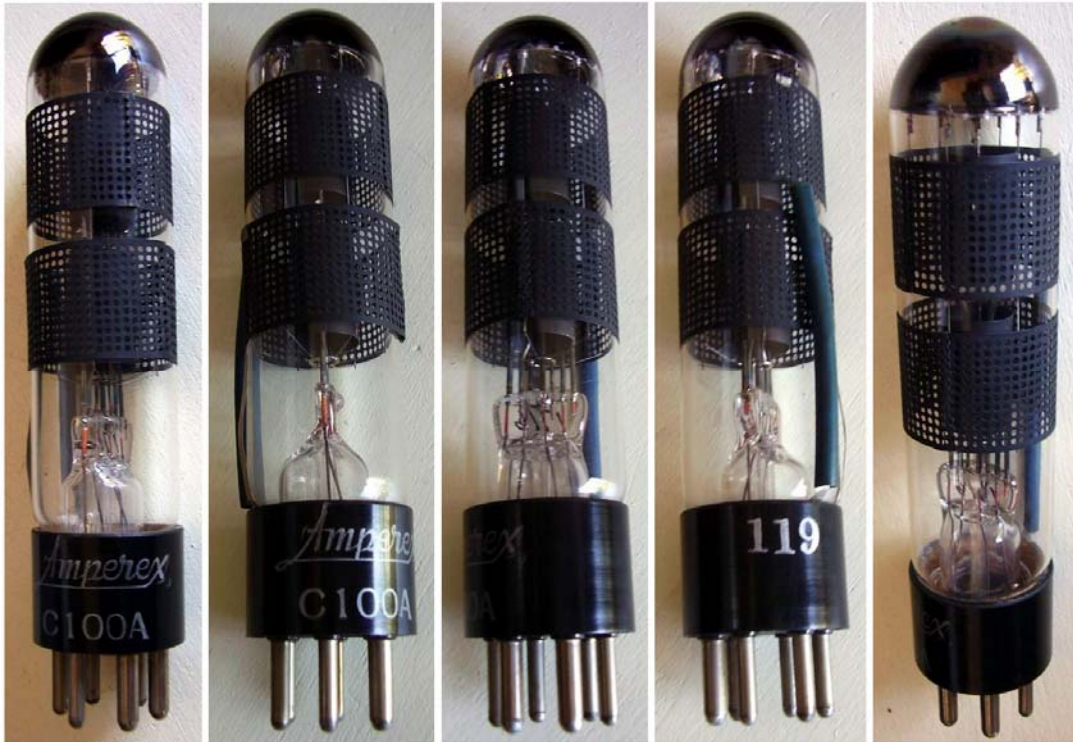


## C-100A – External Grid Oscillator



Oscillator tube specifically developed by Collins, in partnership with Amperex, to avoid to be sued for patent infringement by RCA, AT&T, Westinghouse and other owners of the rights for the De Forest triode oscillator circuit. The tube was intended for use in crystal controlled transmitters. Used in 1936 inside the 30FXC transmitter.

It has a special type of control element, an external grid, which reduces the crystal current and contributes toward very persistent and stable oscillation. Manufactured for Collins by Amperex. 2.5 volts at 1.75 amps filament, 225 V typical DC plate voltage at 22 mA, 0.75 W across 10 kohms load. Gain 3.

Used in the Collins 45A transmitter, introduced in 1935, and in the 30FXC set, 1936. Collins bought the patent rights from Dr. Robert Goddard, the same known for his works on the rockets, who had patented this tube in 1915. (Source: Collins Collector Association). U.S. patent no. [1159209](#).

In the table below, from the site of Collins Radio, the only data available for this rare tube and from TCA Magazine, August 2015 the application circuit as crystal controlled oscillator.

