

Tube of the Month

UV-211

With the success of the UV-203, the RCA Company announced a new version of the “50 watter” in 1923. The 203 was designed as a transmitting tube and there was a need for tubes that would work better as audio amplifiers. AM broadcasting was starting to catch on and modulation tubes were desirable. Audio tubes don’t require any special design above that required for a transmitting tube. The 203 had a mu or amplification factor of 25, so reducing the number of turns on the grid would reduce the mu. The UV-211 had a mu of 12.5. The KFBK (Sacramento) transmitter of 1924 had a pair of 50 watters in parallel in a Hartley circuit and was modulated by a pair of 211 types. The military designated the new tube as the VT-4-B and General Electric, who actually made the tubes, called it the PR-11-A. RCA was not shy about stealing ideas and the 211 was a good example. In 1921, the Western Electric Company developed a similar tube called the WE-211A. RCA held the triode patent, so they got away with a lot.

The UV-211 was replaced by the 211 or VT-4-C. In the 1930s, military designers were developing transmitters for the new heavy bombers. The BC-375 was made in vast numbers before and during WWII. This transmitter had three 211s in the final and one as a modulator. One BC-375 was used in every B-17, B-24, B25, B-26 and early B29s. They were also used in portable and mobile applications. The VT-4-C was very common after the war and they were everywhere along with the BC-375s. You could buy them for a dollar at any swap meet.

Then the audio nuts discovered the better sound from vacuum tubes than solid state and the rush was on. In a short time the VT-4-C cost \$75 each and they are still climbing. Recent eBay sales are well over \$100. New single ended audio amplifiers are being sold and big bucks using the old VT-4-C. Never give up on an old tube. <http://home.comcast.net/~n6jv/211.html>

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