

Tube of the Month

A First Tube Love Affair

In about 1962, I was at a meeting of the Tulare County ARC when I was asked if I wanted a KW+ amplifier for \$50. The story was that after WWII, government agencies, including counties, could get masses of surplus electronics for a penny a pound. Tulare County sent some hams to the distribution center and they returned with enough power supply and RF components to build a 2 KW AM broadcast station. Before commercial FM was used to dispatch police patrol cars, they used AM transmitters just above the 160 meter ham band. The Tulare unit had push pull 304TLs modulated with another pair of 304TLs. It weighed over 600 pounds. I bought the amplifier and hauled it home from the Fresno Air Terminal with a service truck equipped with a bomb hoist. I needed it. It also came with a large box full of spare 304TL triodes. They were very beautiful and tube collecting had its start.

I wanted to use this amplifier and its driver stages on 40 and 20 meters, but it was designed for 2 MHz. The monstrous tank coil was replaced by some copper tubing coils of about 8 inches in diameter. The driver stages were redesigned and I was ready to test. Five, 300 watt, light bulbs were mounted on a 1 X 6 board for a dummy load. When the switch was closed, nothing happened until I hit the key and tried to dip the plate. The bolt of lightning seemed to fill the rear of the amplifier as the RF choke sucked its layers together and everything went dark.

The amplifier had one big power supply for both the modulator and the RF output stage. When the class A modulator was disconnected, the high voltage soared to over 3000 volts. The 304TL tubes like about 2200 volts. I didn't have a variac to lower the voltage, so I went to Fresno and bought two, 3 KVA pole pig transformers. When I wired them back to back, I could use the taps to lower the line voltage to a safe level. We hadn't heard that PCB caused cancer.

A modern, high frequency, plate choke was obtained from a local ham and the next experiment lit all the 300 watt lamps. A life filled with red hot tubes and serious DX chasing had begun.

Visit the museum at N6JV.com

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