

The Secret of the Dead EICO-720 A WN9AVT Mystery

As noted in *The Case of the Inappropriate Impedance*, my junior high school social studies teacher was W9MNO. He loaned me a Heathkit DX-35 to get on the air after I received my Novice license. I knew it was on loan, and that I'd have to get my own transmitter soon.

While studying the ham ads of the day, the EICO-720 transmitter caught my attention. It had a 6146 tube in the final stage, which allowed it to be a good transmitter for both Novices (75 Watts plate input power) and Generals (the EICO-720 could do up to 90 Watts plate input power). It had a plug on the back for the EICO-730 plate modulator for phone operation as a General. And EICO (an acronym for Electronic Instrument Company) also offered a model 722 VFO, which was another valuable accessory for those with a General license.

It sold for \$79.95 as a kit, and there was a radio store within driving distance (for Mom and Dad, that is) that carried EICO equipment. Mom and Dad drove me to the store, and I came home with an EICO-720 kit around Christmas time of 1961. It was my first major construction project (I did make the 40m dipole and a knife-switch T/R switch, so I kind of knew a little about wiring electronic equipment). The biggest new experience was soldering.

I don't remember how long it took me to put it together, but eventually it was time to turn it ON and see what happens. Well, when I turned it ON and plugged in a crystal to check it into a dummy load, nothing happened. The tube filaments lit, so I was happy to know that I wired that part correctly.

Before I received my Novice license, my Uncle Lou had given me a VTVM (vacuum tube volt meter) because he knew I was interested in electronics. With this nice piece of test equipment, I was able to verify that all the DC voltages in the EICO-720 were correct. So now what?

I checked that all the wires went to the correct places. All looked good, so I was at a loss of what to do next. While discussing the problem with the local hams, Bruce W9OTN offered to take a look at it. So it went to his house, and he didn't have it very long – he had found the problem. He said it was a poor solder joint at the crystal socket – and he re-soldered it. Aha! A clue to the mystery! Perhaps a poor solder joint can be bad for the flow of electricity.

When I got home, the EICO-720 loaded up into my dummy load and I was ready to continue my Novice career at the full legal limit of 75 Watts plate input power (a step up from the DX-35). By the way, the radio store that sold me the EICO-720 also had crystals.

As I learned very quickly from this experience, a poor solder joint can be no joint at all. I learned that the joint has to be full and shiny. This experience helped when I put together a Heathkit SB-400 (my first SSB transmitter). I made doubly sure that all the solder joints were full and shiny. That paid off, as the SB-400 worked the first time I turned it ON.

Another case solved. Stay tuned for another WN9AVT Mystery in the near future.

WN9AVT Mysteries

