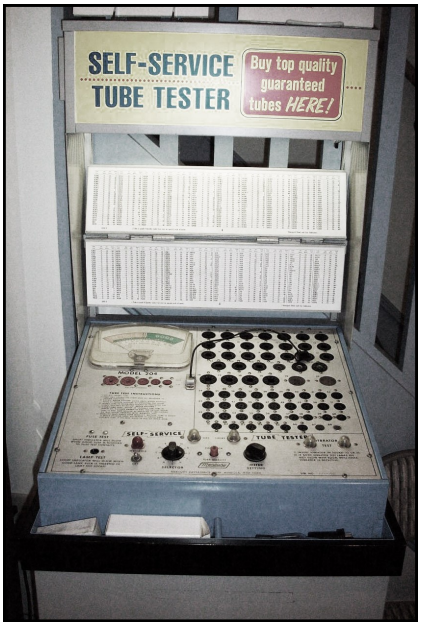
National Capital Radio & Television Museum

Artifact of the Week:

Mercury Model 204 Self-Service Tube Tester



In the 1950s and '60s, if you visited your neighborhood hardware or drug store, you might well have encountered a tube tester like this week's artifact.

Mid-20th century vacuum tube radios and television sets tended to require service more often than today's solid-state electronics. The most common cause of trouble was a burned out or weak vacuum tube. The console television sets commonly found in American homes of that era were much too bulky to lug to a service shop, so if your TV set failed, you would call a service technician who would come to your house with test equipment and a suitcase filled with replacement tubes. Service calls were expensive, so newsstands began to display booklets with titles like *Be Your Own Radio/TV Serviceman!* The museum library has a number of them, along with magazines such as *Popular Electronics* that featured similar articles.

These publications explained how radios and TVs worked. They explained how to adjust controls on the back of the set such as horizontal hold and linearity to get the best picture, and how to check antenna connections. Noting that defective tubes caused most failures, they showed how to remove the back of the set, pull out the vacuum tubes, and take them to a store that had a self-service tube tester. Many different types of tubes looked almost identical. The trick when removing the tubes was to make a diagram (unless there was one inside the set) to ensure that you could insert the tubes back into the right sockets.

At the store you located the tube type on the chart above the tester, set the controls accordingly, and pushed the TEST button, noting the "GOOD" or "BAD" reading on the meter. A locked compartment underneath the tester held new tubes for sale.

While a tester like this one could flag a tube that was clearly defective, its ability to detect performance subtleties was lacking. Some radio/TV service shops offered free tube testing using a higher quality tester. Self-service tester users also needed to seek out an honest merchant. An unscrupulous store owner could fiddle with the tester's calibration adjustment so that tubes would test worse than they really were. Today's modern electronic devices have become so reliable and so cheap that most users just discard a non-working electronic gadget and buy a new one rather than try to find and replace a defective part.

We appreciate your support of the museum so that historical artifacts like this one, and the stories that go with them, can be preserved for future generations. THANKS!