

# VINTAGE TEST EQUIPMENT

## The Tektronix Type 545A Scope Save Our Scopes!

BY LOREN P. ASHWORTH

WEB EDITION

*Many of us remember using these wonderful old instruments in our early collecting days. As described here, putting them back into working order is a worthwhile endeavor. (Editor)*

The classic Tektronix Type 545A with camera bezel, ca 1958-1960, shown in Figure 1, was recently rescued. Figure 2 shows the scope with the Type CA dual-trace, plug-in slid out to show its tubes. The unit provides both standard and time delay sweep. A very early example of a time delay scope, it was complete when given to me, save four or five 6DJ8 tubes that had been removed by some previous owner.

The slightly modified instrument sports an incredible tube count of 88 tubes. Around 500 watts of power are required to operate the scope. Figure 3 provides another right-hand view of the scope with the subchassis in open position. Figure 4 shows even more of the tubes and a view inside the plug-in module.

Unlike my newer Type 543B scope, the 545A has a tube lineup of pretty standard types. Any radio hobbyist would recognize the types from radio, TV and audio numbers. In contrast, the 1962-1964 Type 543 has several industrial tubes, as well as a transistor circuit, in addition to the many standard types.

### MAKING IT WORK

Upon receiving the scope, I had to find out if it worked. First, I replaced the missing



Figure 1. The Tektronix Type 545A scope as found with plug-ins and a camera bezel.



Figure 2. A right view of the Type 545A showing the Type CA dual trace plug-in to show its tubes. A dual-trace module allows two different signals to be displayed simultaneously, one above the other on the CRT face.

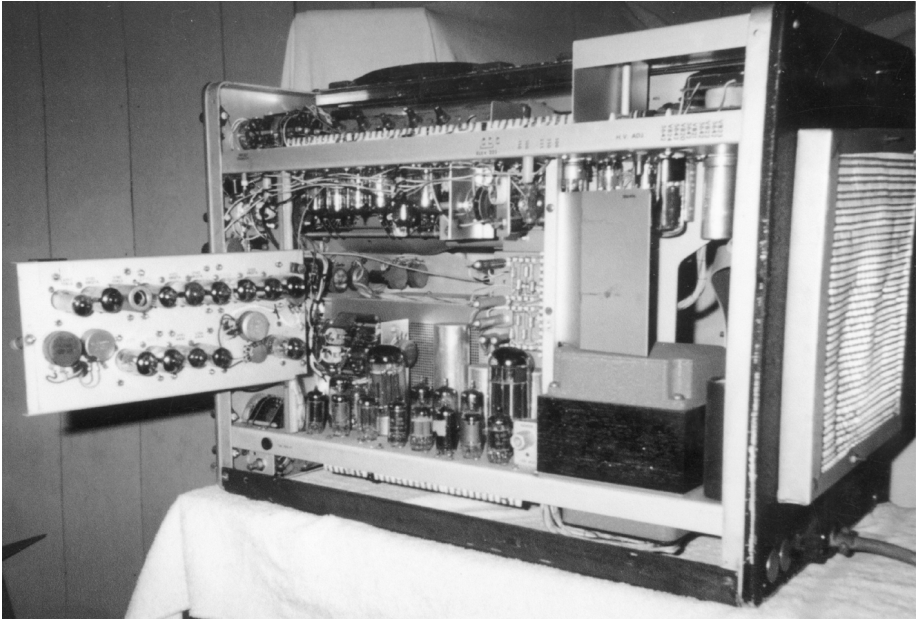


Figure 3. A second right view showing the sub-chassis open. It's all tubes, except for the many silicon diodes in the B+ power supply visible above and left of the massive power supply transformer.

6DJ8 tubes with cheaper used Type 6BQ7s. The B+ buzzed noisily and would not latch on (the relay comes on after the tubes light up). With a screwdriver, I forced the armature down hard for a few seconds and — voila, it held!

Some experience with my working Type 543B scope, a little newer unit, (see A.R.C., May 2004, "Photo Review") helped me to fiddle this set to get a trace. The unit contains a square wave generator/calibrator, which is rather touchy, but it works. Many sockets and controls were dirty, but the trace came up finally.

**SAVE THESE UNITS**

These units cost thousands of dollars when new in 1958-1960 — probably the price of a new auto. This one is reasonably clean inside, and except for the bad relay, it still functions.

I hope this article encourages anyone who can to salvage these scopes. They are boat anchors for sure, but they don't take up much room. I hate to see them just discarded with their superb workmanship and engineering.



Figure 4. An open left side view showing more tubes. The plug-in is inserted showing the inside wiring.

*Loren Ashworth trained in radio at the Coyne Electrical School and served in the U.S. Army Signal Corp. in the early 1960s. Self-employed since 1968, he does commercial and industrial sound jobs, as well as some TV and radio installation and repair.*