

## MARK J. BLAIR'S BLOG OF MOSTLY MILITARY STUFF

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## TV-7 (\*) Tube Tester Alignment Hints

Radio Room

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So, you just bought a TV-7 (or TV-7A, TV-7D, etc.) tube tester at a ham radio swap, and now you're wondering how to test and align it. The alignment procedure isn't too difficult, and a photocopy of the technical manual is available from Fair Radio Sales if you don't already have one. If your tester is missing its tube data book, you can order a reprint from Antique Electronic Supply, as well as replacements for the shorts lamp and the fuse lamp.

The TV-7D is the easiest one to align, since there are internal potentiometers for all of the required adjustments. The earlier models are a bit less convenient to align, because they require you to replace fixed resistors in order to make some of the adjustments.

There's one little trick to aligning one of these testers, and I drove myself crazy before I figured it out. If you perform the alignment with the exact test equipment that is specified in the manual, you won't have any trouble. However, I didn't have the exact equipment, and I tried to use my fancy digital multimeter, which has a fixed input impedance of about 10Mohms. The problem is that the alignment procedure was intended to be performed with a meter which has an input impedance

of 1000 ohms per volt (that is, its input impedance is 1000 ohms times the voltage of the scale you select), and this significantly loads the circuit under test, thus affecting the measurements quite a bit. If you use a meter with a higher input impedance to align your TV-7 (and you probably will), you must place resistors in parallel with your meter in order to simulate the loading of the specified meter. Since the procedure tells you which scale to use for each measurement, you can easily figure out the resistance which you must place in parallel with your meter for each measurement.

The TV-7(\*) tube testers are fine pieces of equipment, in relatively small and convenient packages. Good luck with your TV-7(\*)!

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