

Re: Tektronix 7603 won't trigger

Source: <http://sci.tech--archive.net/Archive/sci.electronics.repair/2009-06/msg00770.html>

- *From:* Jeff Liebermann <jeffl@xxxxxxxxxxx>
 - *Date:* Mon, 22 Jun 2009 09:04:36 -0700
-

On Mon, 22 Jun 2009 05:08:14 -0700 (PDT), GanjaTron <ganjatron@xxxxxxx> wrote:

Thanks for all the replies! I did check for ripple with a working scope, and found a few lines with obvious sine waves (like 4Vpp), but I understand the PS also has unregulated outputs, so I didn't investigate any further. The cap voltages themselves checked OK with a voltmeter.

If the caps are bad, the voltage will be temporarily within limits, but the ripple voltage will be rather high. That causes blurred traces that can't be adjusted out with the focus and astigmatism controls. Use another scope to verify that you're getting DC on the PS voltages.

Jeff, when you say the caps "blow", you mean they literally explode? :^O

No. They got hot and eventually blew a series resistor or fuse. I forgot which. I got lucky and caught it before it destroyed any active components. The bakelite bottom of the can capacitors were obviously bulging and had turned from brown to black. My capacitance and ESR capacitor tester both showed that they were under value and with a very high internal series resistance.

I won't mention what I used to replace the caps, or how the replacements were installed. I'm not very proud of the work.

The caps on the interface board would be the next suspects, if they weren't so tough to get at (on top of which I'd have to lift them out at one end to check).

If it were easy, it would be no fun. If you don't want to do it

Re: Tektronix 7603 won't trigger

twice, just find the replacement caps and install them instead of testing the originals. This way you're sure that you won't need to dive in again later.

This particular 7603 has the fan mod, btw. The TO-3s show no signs of cracks, and I didn't find the gold dot connectors you mentioned. I guess this is a revision. Mainframe serial# is B377720 with option 03, which according to the service manual means EMI shielding, though I can't find the bits mentioned there. Oh, and it has the readout. Trace is mushy and the scope stinks. ;^)

The stink is a clue. It's probably boiled electrolyte.

Regards,

--Roland

--

Jeff Liebermann jeffl@xxxxxxxxxxx
150 Felker St #D <http://www.LearnByDestroying.com>
Santa Cruz CA 95060 <http://802.11junk.com>
Skype: JeffLiebermann AE6KS 831-336-2558