

Re: Great Design

Source: <http://sci.tech-archive.net/Archive/sci.electronics.design/2009-04/msg04301.html>

- *From:* "Michael A. Terrell" <mike.terrell@xxxxxxxxxxxxxx>
 - *Date:* Sun, 26 Apr 2009 20:26:57 -0400
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VWWall wrote:

Michael A. Terrell wrote:

VWWall wrote:

Last year I needed another audio signal generator and retrieved a HP 200AB from my garage, (SN 1651). It was one of the first HP instruments, introduced in 1952 to replace the older 200A and 200B. It had been unused for over fifty years. I was worried about the electrolytic capacitors, and debated about starting it on a Variac to "re-form" them if needed. Running the rectifier at low filament voltage might cause more damage. Instead, I just plugged it into 120 V AC, after replacing the line cord, on which the rubber had deteriorated. (LA smog!?)

It worked perfectly; even the calibration was within a couple of cycles at the 60Hz where I checked it. There's no 60Hz hum in the output, so the filter caps must be OK!

They don't make 'em like they used to!

Still it wouldn't hurt to replace the paper capacitors. The degrade from the high acid paper that was used, and develop leakage. That model on had one electrolytic.

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My SN 1651 has a 20microfd and a 40microfd electrolytic in the power supply, with an 800 ohm resistor between them. The supply for the output 6K6 tubes is taken ahead of the resistor.

C6, C9, C10 and C11 will change the bias on the four tubes, causing them to draw more current. That can damage the tubes, and change the value of their plate resistors.

I did have one half of the 6SN7 driver go bad. I replaced it with another, and for a while thought I'd forgotten all I knew about vacuum tube troubleshooting, as it didn't fix the problem. A little more probing with my trusty VM showed the replacement 6SN7 had the same half bad! I'll check the paper condensers next time I open the case, but the tube currents seemed OK when I looked at them at that time.

<http://bama.edebris.com/manuals/hp/200ab/> has the manual, if you need a copy. It is in DjVu format.

Thanks for the reference; I already have a copy.

The first thing I did, when I retrieved the oscillator, was to download the manual. Although it's for SN 7725 and above, it seems to be accurate. I had to go back to WinXP to print out the .djvu format. One of these days, I'll get around to installing a .djvu program for Linux.

The only thing that's missing is the leather handle, which had rotted and broken. It's in the parts list, but probably not available.

Find someone selling custom leather belts at a flea market and see what they want to make a replacement. I knew one who would, but he died a few years ago. For some things you can use the modern replacement suitcase handles. I have a dozen or more of them, but haven't added them to my website yet. They are the right size for some tube testers.

You can't have a sense of humor, if you have no sense!

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