

HP 8903A Audio Analyzer schematic

Discussion in 'Datasheets, Manuals and Component Identification' started by shrtrnd, Jan 14, 2011.

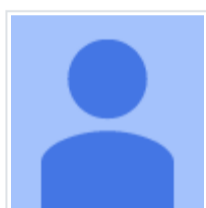
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Jan 14, 2011

#1



[shrtrnd](#)

3,827

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Jan 15, 2010

Repairing old Hewlett Packard 8903A, unfortunately, the only manual I have is for prefix serial numbers 1942A through 2016A, and the instrument I'm repairing is S/N prefix 2433A.

My problem is A2 Input Amp Board (HP #08903-60114).

With no access to a schematic for THIS board, I can't ID the value of the one or two watt resistor that burned-up on it. Physically on the board, the resistor is above U7 (8-Pin DIP 1826-0783), and just to the left of Q2 ([2N5268](#)).

Anybody have access to this schematic, and can tell me the value of this resistor?

Thanks

Update: Got the [HP8903A](#) manual for serial number prefixes 2450A to 2948A. It doesn't do me any good either, the A2 board is radically different.

So far in my search, it looks like I need to talk to somebody with HP Manual #08903-90023 for Serial Number Prefixes 1942A thru 2514A.

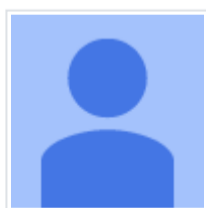
Hope I get lucky here,

Thanks again, anybody who might have the resistor info I need on this A2 board.

Last edited: Jan 14, 2011

Jan 26, 2011

#2



[link ko4bb](#)

3

0

Jan 26, 2011

[link ko4bb](#)

Hi

I have no instrument or manual but did you check here?

http://www.ko4bb.com/cgi-bin/manuals.pl?dir=HP_Agilent

regards

from Felix

[on6be](#)

Jan 26, 2011

#3



[shrtrnd](#)

3,827

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Jan 15, 2010

Hadn't checked there, but I just did. Their manual is for the first model. I have that manual. I contacted an engineer who used to be HP. He gave me the third manual (S/N prefix 1942A thru 2514A). Unfortunately, I need the first revision manual.

The original model had problems, they did a stop-gap revision model to overcome the deficiencies of the original, (which is the unit I'm trying to repair now).

My model must have been very short-lived. The 2nd revision model has an A2 PCB, that is pretty close to the next upgrade, the [HP8903B](#) (which has been pretty successful).

So I'm stuck, until I find somebody with the manual for my serial number.

Thanks for the input though.

It's still sitting on my bench, hoping I get lucky here, sooner or later.

Feb 9, 2011

#4



[shrtrnd](#)

3,827

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Jan 15, 2010

Update for anybody interested.

Found a photocopy of a microfiche copy of the schematic I needed.

This revision was called 'P/O Change 20', the A2 Input Amp PCB.

Only half of it is readable. As near as I can tell, my smoked resistor is R17, a 5.11K Ohm 1% 1/2W resistor. (It's getting a 1W replacement)

The top of the page says Model 8903A 08903-90023/24,

Figure 8-53 P/O A2 (P/O Change 20).

This was difficult to find, and just follow-up info, for anybody who sees the same problem at some future date.

Sep 11, 2013

#5



[dmnieto](#)

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Sep 11, 2013

shrtrnd, if you still have the manual, could you please send it to me?

I have a lot of distortion coming from the input attenuator board (A6), but all the Service manuals I have are for the A6 version with two relays, while mine has three.

I also have the manuals up to 2016A... do you have the one for Prefixes 1942A thru 2514A. ?

Sep 12, 2013

#6



[shrtrnd](#)

3,827

520

Jan 15, 2010

The manual I have is for prefix 1942A - 2514A, but we're talking hundreds of pages, and I only have the print copy. (So I can't just 'send it to you').

I'll check it for your 3-relay A6 board, and see if it's on my schematic.

I assume you already Googled it, to see if you can get a down-loadable copy?

I'll get back to you when I've got time to dig-up the information.

As a side-note if you Google for it, HP often added revision information in engineering update notes, so if you search on-line, specify the 3-relay A6 board, it may come up as a revision update, and not under the original HP manual itself.

Sep 12, 2013

#7



[dmnieto](#)

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Sep 11, 2013

Thanks, let me explain

I just bought a "working" hp 8903a from ebay for a low price, but it is showing horrible distortion in the range 20Hz->3Khz (4% at 20Hz, 0.18% at 1KHz, 0.05 at 3KHz, 0.02% 10KHz following) which render it unusable.

I am starting to feel that it is the source the issue, or maybe that the notch is really badly calibrated, but following the service manuals it appears to be ok.

What I do see is that the signal in [A5OSC1](#) is clean at 1KHz, also at A6 AMP1..., but I see a significant second order harmonic (-54dB) when I probe at A6 AMP3.

Is there anything in the doc that could explain it?

Sep 12, 2013

#8



[shrtrnd](#)

3,827

520

Jan 15, 2010

Not going to be able to help you with this.

My schematic has only 2 relays, with a dozen 'PO Service Sheets', that specifically reference modification to the A6 board. Not a one of them discusses the addition of your 3rd relay.

I think you've got one of those 'stop-gap' middle of the production run units, where they were integrating upgrade modifications in the middle of a production run.

Like me, it's going to take some serious digging, to find what you need.

ALL information you're looking for will be based on your Model Number and THE SERIAL NUMBER.

Good luck.

Sep 12, 2013

#9



[shrtrnd](#)

3,827

520

Jan 15, 2010

I don't have the schematic for your board.

The [HP8903A](#) originally had 2 relays on the A6 board, after all the mods, when they re-designated the unit the [HP8903B](#), it had four relays on the A6 board.

There have been so many modifications on this unit between models, I don't know half of what they did.

I know you know, but trace that signal until you find the source of your distortion.

I don't know what's causing it.

Sep 12, 2013

#10



[dmnieto](#)

3

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Sep 11, 2013

Thanks, I finally found the schematic. I managed to grab the manuals and they contain forward descriptions that cover almost all the range till 2451.. It is not the cleanest way to read it but I have plenty of space in my desk


Thanks,

I will need the good luck to track this...

[ikhavkin](#) likes this.

Nov 5, 2014

#11



picoooper

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Nov 5, 2014

dmnieto said:

Thanks, I finally found the schematic. I managed to grab the manuals and they contain forward descriptions that cover almost all the range till 2451.. It is not the cleanest way to read it but I have plenty of space in my desk

Thanks

I have an operational 8903A with the 3 relay A2 board; maybe I can help you?

Dec 6, 2016

#12



ikhavkin

1
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Dec 6, 2016

I acquired 8903A with a similar issue in its signal generator as dmnieto mentioned - high distortion on lower frequencies (easily visible on 20-100Hz with an oscilloscope) that tends to go down with higher frequencies. And it easily shows -70db...-80db distortion at 1Khz with an external signal, so pretty sure it's in 8903A signal generator.

Mine has S/N prefix 2420, does anyone still have the service manual up to 2451 prefix? I found only for older models (manual dated Jan 1981)

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