HP 8340B repair

FabioV

1:28am (https://groups.io/g/HP-Agilent-Keysight-equipment/message/129710)

Hello All,

I recently acquired a HP 8340B. Unfortunately it's not fully functional. There is a problem when it crosses bands 3 and 4: almost no power and and the power dbm indicator displays only dashes. But I noticed that sweeping very slowly from band 3 to band 4 seems working fine. Maybe only a problem with Cal constants? When I opened the unit to find the cal constant printed copy I saw that, first, the paper is missing, and that one internal cover is missing. It's the one for the microprocessor assembly, having a slot for tests leds. From web images, this cover as following indication: Do not operate for extended periods without this cover to ensure proper cooling. So before continuing the troubleshooting, I would like to reinstall a cover. Does anyone knows where I could buy one or would have one to sell?

Thanks
Fabio

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Roman Luschik

6:07am (https://groups.io/g/HP-Agilent-Keysight-equipment/message/129715)

with my device was such a calibration list, in attachment

if someone has such from 8340A(B), please send

22.09.2022, 11:28, "fab-lp@hotmail.com" <fab-lp@hotmail.com>:

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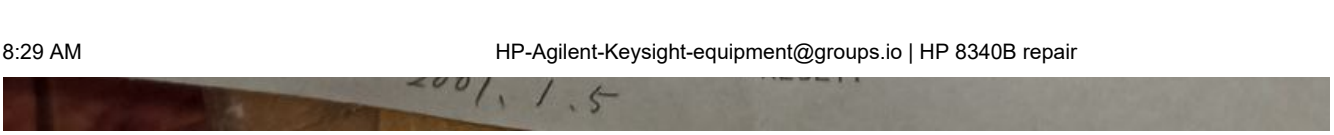
8341A CALIBRATION CONSTANTS

SERIAL NUMBER: 0182 8341AREV 23 MAY 85

1.	DWELL TIME	50	34.	AT90 SLOPE	-3	67.	AT60 SLP 20GZ	10
2.	YTM BX DLY 2	102	35.	LEV DAC OFF; SYS	0	68.	AT70 SLP 20GZ	13
3.	YTM BX DLY 3	131	36.	LEV DAC GAIN; SYS	0	69.	AT80 SLP 20GZ	15
4.	YTM BX DLY 4	125	37.	ADC OFF SYS	0	70.	AT90 SLP 20GZ	18
5.	YTM DLY 1	98	38.	ADC GAIN SYS	0	71.	YTM OFFSET 1	1024
6.	YTM DLY 2	85	39.	ADC GAIN LO	-54	72.	YTM OFFSET 2	1024
7.	YTM DLY 3	88	40.	ADC GAIN HI	-49	73.	YTM OFFSET 3	1024
8.	YTM DLY 4	104	41.	MAX SWEEP RATE	600	74.	YTM OFFSET 4	1024
9.	YTM GAIN 1	882	42.	ADC OFFSET	-38	75.	YTM SGL BD RT	25
10.	YTM GAIN 2	827	43.	AM OFFSET	-2	76.	YTM MTL BD RT	1000
11.	YTM GAIN 3	741	44.	LVL DAC OFF; INT	32	77.	YTM BX RTA	175
12.	YTM GAIN 4	990	45.	LVL DAC OFF; EXT	0	78.	YTM BX RTB	50
13.	LO SLOPE	6	46.	LVL DAC GAIN; LO	26	79.	OI MODEL	1
14.	HI SLOPE	100	47.	LVL DAC GAIN; HI	19	80.	YTM TEMP COMP	0
15.	9GZ SLOPE	93	48.	LVL DAC GAIN; EXT	25	81.	LOCKWORD	0
16.	20GZ SLOPE	190	49.	PWR SWP GAIN	2	82.	LOCKWORD ENABLE	0
17.	AT10 OFFSET	-4	50.	YTM BX GAIN 1	854	83.	unused	0
18.	AT20 OFFSET	-2	51.	YTM BX GAIN 2	766	84.	unused	0
19.	AT30 OFFSET	-2	52.	YTM BX GAIN 3	1030	85.	unused	0
20.	AT40 OFFSET	-5	53.	YTM BX GAIN 4	990	86.	unused	0
21.	AT50 OFFSET	-4	54.	STOP LIMIT	20000	87.	unused	0
22.	AT60 OFFSET	-2	55.	START LIMIT	10	88.	unused	0
23.	AT70 OFFSET	12	56.	PRESET OPTION	0	89.	unused	0
24.	AT80 OFFSET	13	57.	HPIB ADDRESS	707	90.	unused	0
25.	AT90 OFFSET	10	58.	RETRACE DWELL	0	91.	unused	0
26.	AT10 SLOPE	-2	59.	ATTEN CONFIG	17700	92.	unused	0
27.	AT20 SLOPE	-4	60.	CONFIGURATION	29	93.	unused	0
28.	AT30 SLOPE	-3	61.	SERIAL #	182	94.	unused	0
29.	AT40 SLOPE	-5	62.	AT10 SLP 20GZ	4	95.	unused	0
30.	AT50 SLOPE	-6	63.	AT20 SLP 20GZ	5	96.	unused	0
31.	AT60 SLOPE	-6	64.	AT30 SLP 20GZ	5	97.	unused	0
32.	AT70 SLOPE	1	65.	AT40 SLP 20GZ	8	98.	MODEL #	1
33.	AT80 SLOPE	0	66.	AT50 SLP 20GZ	9	99.	CHECKSUM	12583

Procedure for manually entering calibration data into the 8341A.

1) Push the following sequence of KEYS:
   Instrument Preset SHIFT MHz 1 2 Hz SHIFT KHz 2 2 Hz
2) Note the Entry Display will indicate the Calibration Constant number and value.
3) Enter via the KEY BOARD or DATA KNOB the correct value for the first Calibration Constant indicated in the display.
   << Terminate KEYBOARD entries with the Hz key >>
4) Go to the next Calibration Constant by pushing the UP step key. The next cal constant can then be entered. Do not enter the "CHECKSUM" Constant (this is computed automatically).
5) The Step Keys can be used to move from one Calibration Constant to another to either check them or to correct them.
6) After all the entries have been made, check that all the numbers are correct by using the step keys to review and verify them.
7) Allow the instrument to warm up for 1/2 hour and make sure that nothing is connected to the Stop Sweep connector on the rear panel. Push SHIFT PEAK to perform an Automatic Tracking Calibration. This step may modify the "YTM GAIN n" & "YTM BX GAIN n" constants.
8) The CALIBRATION data should be permanently stored in the Non Volatile Protected Memory by pushing the following key sequence: SHIFT MHz 14 Hz SHIFT KHz 5349 Hz PRESET.



(https://groups.io/g/HP-Agilent-Keysight-equipment/attachment/129715/0/2022-09-22 15.02.52.jpg)

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Roman Luschik 6:07am (https://groups.io/g/HP-Agilent-Keysight-equipment/message/129716)

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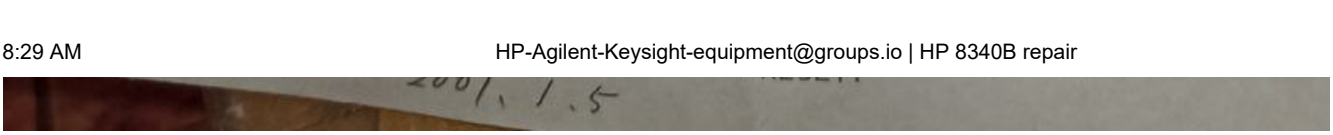

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Richard Parrish 8:20am (https://groups.io/g/HP-Agilent-Keysight-equipment/message/129717)

The missing cover won't make a lot of difference in the short term. Before you go much further, you might try the automatic peaking routine. Push the shift button and then the peak button and the unit will try to peak itself across the band. If that doesn't work, you'll have to go thru the full calibration routine for flatness but not anything else. All that is really required is a scope that can do X-Y display, a crystal detector good to 26GHz and a DVM to begin with. To confirm the adjustments, you will need a power meter and the proper power sensor. The procedure works but don't try to take any short cuts unless you've done it before. To get full power in band 4, the 2-7GHz power amp has to have +27dBm output from 5-6.7GHz.

Richard

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(https://groups.io/g/HP-Agilent-Keysight-equipment/topic/93847770?p=%2C%2C%2C20%2C0%2C0%2C0%3A%3A%2C%2C%2C0%2C0%2C0%2C93847770)