E4991A-03

S E R V I C E   N O T E

E4991A RF Impedance Analyzer

**Serial Numbers: MY43300401/MY43300566
SG43300101/SG43300105**

Abrupt hang-up in continuous measurements

This service note describes the symptom and remedy for abrupt hang-up in continuous measurements that possibly arises on the units with specific serial numbers.

To Be Performed By: Agilent-Qualified Personnel or Customer

**Parts Required:
NONE**

Note: Refer to Agilent.com -> E4991A -> Drivers & Software -> BIOS Update to download the BIOS Update software or E4991A-Q3 of Service FAQ on CTD-Kobe website.

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

MODIFICATION RECOMMENDED

ACTION CATEGORY:	[[]] IMMEDIATELY X ON SPECIFIED FAILURE [[]] AGREEABLE TIME	STANDARDS: LABOR: 0.5 Hours	
LOCATION CATEGORY:	X CUSTOMER INSTALLABLE [[]] ON-SITE X SERVICE CENTER	SERVICE [[]] RETURN INVENTORY: [[]] SCRAP [[]] SEE TEXT	USED [[]] RETURN PARTS: [[]] SCRAP [[]] SEE TEXT
AVAILABILITY:	PRODUCT'S SUPPORT LIFE	AGILENT RESPONSIBLE UNTIL: EOS	
AUTHOR: HH	PRODUCT LINE: WN		
ADDITIONAL INFORMATION:			

Agilent Technologies

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Situation:

The E4991A with specified serial numbers may hang up within 1 hour or 1 day when continuously operated in EXTERNAL trigger mode. To restart operation, the E4991A must be turned off and on. In INTERNAL trigger mode, the incidence of hang-up symptom is low.

Solution/Action:

The hang-up symptom is caused by version 02.03.05 or 02.23.05 BIOS in Motherboard (CPU board). When the E4991A units with specified serial numbers are in for service, check the version of installed BIOS. If it is version 02.03.05 or 02.23.05, replace the BIOS with version 02.03.11 or later one in accordance with the following procedure:

[BIOS version check procedure]

1. Connect keyboard to Mini-DIN type KYBD connector on the E4991A rear panel.
2. Turn the instrument on.
3. As Agilent Technologies logo appears, press **F2** key. Phoenix BIOS Setup Utility is displayed.
4. As a wizard prompts you to "Enter Password:", press **e, 4, 9, 9, 1, a** and **Enter** keys.
5. BIOS setup menu is displayed. Select "Advanced" with arrow ←→ keys from the menu, then "Advanced Version Information" with ↑↓ keys and press **Enter** key.
6. Look at the following BIOS version information:
    Main BIOS   [02.03.05 / 02.23.05 / 02.03.11]
7. When Main BIOS is version [02.03.05] or [02.23.05], proceed to BIOS update procedure. Otherwise, the BIOS does not need to be updated. Exit the BIOS Setup Utility.
8. Press **ESC** key to go back to the first item of the BIOS setup menu.
9. Select "Exit" with arrow ←→ keys, "Exit Discarding Changes" with ↓ key and press **Enter** key.
10. After Windows OS and E4991A measurement display are rebooted, turn the E4991A off.

[BIOS update floppy disk creation procedure]

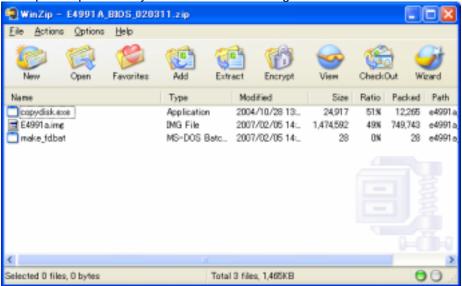1. Access either of the webs to download the zip file.
 (For Customer)

Agilent.com -> E4991A -> Drivers & Software -> BIOS Update to download the BIOS Update software.

http://www.home.agilent.com/agilent/editorial.jspx?cc=US&lc=eng&ckey=924230&nid=-536902439.536880679.02&id=924230
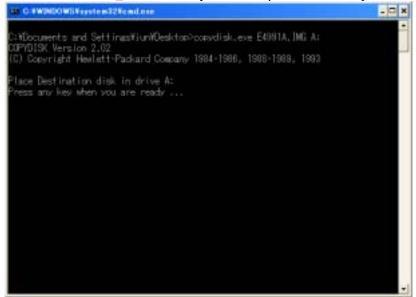
 (For Agilent Internal)

http://kobemktg.jpn.agilent.com/field_eng/service/faq/e4991a.htm#3

2. Unzip the zip file then you can see the following three files.

3. Extract (or Drug   Drop) these three files to your Desktop screen.
4. Insert your formatted floppy disk to your PC's floppy disk drive.
5. Double click make_fd.bat file on your desktop screen. Then you can see Command Prompt screen.

```
C:\WINDOWS\system32\cmd.exe

C:\Documents and Settings\iun\Desktop>copydisk.exe E4991A.IMG A:
COPYDISK Version 2.02
(C) Copyright Hewlett-Packard Company 1984-1986, 1988-1989, 1993

Place Destination disk in drive A:
Press any key when you are ready ...
```

6. Press any key. Then BIOS Update software is automatically installed to your floppy disk.
   In case it fails, close the Command Prompt screen and retry from (5).
7. While installing, you see xxxx-xxxx of 2879. Then "copy complete" is shown when all the installation
   is completed.
8. Verify the following 10 files are on your floppy disk.
   91A_0311.ROM
   Choice.com
   IBMBIO.COM
   IBMDOS.COM
   PANEL.EXE
   PHLASH.EXE
   PLATOEM.BIN

   AUTOEXEC.BAT
   COMMAND.COM
   CONFIG.SYS

   Note: AUTOEXEC.BAT, COMMAND.COM and CONFIG.SYS can be seen when the "show hidden
           files and folders" is activated.
           To check this, go to followings below.
           Explorer -> Tools -> Folder Options… -> view -> Hidden Files and folders.

[BIOS update procedure]
1. Insert Floppy Disk for BIOS Update in the FDD slot of the E4991A.
2. Turn the E4991A on.
3. As Agilent Technologies logo appears, press **ESC** key and wait for 2 seconds until "Boot menu" is
   displayed.
4. Select "Removable devices" with ↓ key and press **Enter** key. "Phoenix BIOS flash utility" is
   booted from floppy disk to change BIOS setup.
   NEVER TURN THE E4991A OFF UNTIL YOU FINISH WITH SUCCEEDING STEPS 5, 6 AND 7.
5. The following message will be displayed:
   Phoenix BIOS flash utility: PHLASH overwrites motherboard BIOS flash ROM and erases
   existing CMOS setting.
   Wait approximately 1 minute until BIOS flash ROM update is finished.
6. As "PRESS ANY KEY TO EXIT" is displayed, press **Enter** key. The E4991A is automatically
   rebooted. Motherboard CMOS setup is restored by data from updated flash ROM.

[BIOS update confirmation procedure]
1. Perform step 3 through 6 of BIOS version check procedure.
2. At step 6, verify that version [02.03.11] is displayed. If OK, proceed to BIOS date setup procedure.
 Note: If version [02.03.05] or [02.23.05] is displayed, re-perform BIOS update procedure.

[BIOS date setup procedure]
 Since the date of BIOS is reset to Jan 01 2001, set it to correct date as follows:
1. With arrow ← → keys, select "Main" from BIOS Setup menu.
2. Select "System Time" and set the displayed time to present time by using +, - and **TAB** keys.
3. Select "System Date" with ↓ key. Set the displayed date to present date by using +, - and **TAB** keys.
4. Press **ESC** key to go back to the first item of the BIOS setup menu.
5. Select "Exit" with arrow ← → keys, "Exit Saving Changes" with ↑ ↓ keys and press **Enter** key.
6. "Setup Confirmation" dialog appears. Select "Yes" to exit the menu and auto-reboot the E4991A.
7. Remove the BIOS Update disk from the FDD slot of the E4991A.