S E R V I C E   N O T E

SUPERSEDES: None

4986A Ethernet LanProbe

Serial Numbers: US34380000/US34389999 Modification applies to all 4986A's

Firmware download failure results with Debug prompt

Duplicate Service Notes: 4987A-02

To Be Performed By: Customer, or Agilent-Qualified Personnel

Parts Required:

A Terminal or a PC emulating a Terminal (Using Windows Terminal or Hyperterminal applet). The following RS-232 (Crossover or null modem) cables.

P/N	Description
24542G	RS-232 9-pin female to 25-pin male
Non Agilent	9-pin male to 9-pin male Gender Changer

Situation:

Firmware download failure results with the 4986A booting to the Debug prompt.

Continued

DATE:March 1999

ADMINISTRATIVE INFORMATION

SERVICE NOTE CLASSIFICATION:

INFORMATION ONLY

AUTHOR:	ENTITY:	ADDITIONAL INFORMATION:
DTH	0801	

 Agilent Technologies

Example 4986A output shown below.

POST...

        Timer0/Refresh Counter: testing...Okay
        SCC Polling: testing...Okay
        DRAM Lower 1 Meg: testing...Okay
        512K Flash Found 4M DRAM Found
        128K BRAM Found
        Upper DRAM: testing...Okay
        RTC NVRAM: testing...Okay
        RTC Clock: testing...Okay
        BRAM: testing...
        BRAM: testing...Okay
        Timer0/Slicer: testing...Okay
        Timer1: testing...Okay
        LAN Controller: testing...Okay
        SCC Interrupts: testing...Okay
        Watchdog: testing...Okay Application Header Not Found.

        =>

Solution / Action:

The 4986A firmware must be restored to Flash using XMODEM. Use the following procedures to download the firmware.

1. Obtain and copy the the current firmware file to a floppy, or to a directory on the pc.

    The firmware may be retrieved by FTP from the col.agilent.com (15.255.240.16) server in the directories:/dist/netmetrix/lpfirmware/ rmon1. Please refer to the readme file contained in this directory for current firmware version, special notes, and checksum information.

2. Connect a terminal (or a PC emulating a terminal) Com1 or Com2 port to the LanProbe RS-232C port using an RS-232 crossover or null-modem cable.

3. Configure the terminal:

    Using the Windows Terminal Program

    a. Open the Windows Terminal Program.

    b. From the Terminal Menu; Select Settings, Communications.

    c. Configure the Terminal for;
            Baud Rate -   9600
            Data Bits   -   8
            Stop Bits   -   1
            Parity   -   None
            Flow Control -   Xon/Xoff
            Connector -   Com1 or Com2 (Com port for connection to LanProbe)

Using the Windows HyperTerminal Program

a. Open the Windows HyperTerminal Program. From the Windows Start menu.
    Select Programs, Accessories, HyperTerminal.

b. Double-click the HyperTrm icon.

c. Select "Cancel" to close the Connection Description window.

d. From the New Connection - HyperTerminal window. Select File, Properties.
    The New Connections Properties window will be displayed.

e. In the Phone Number section. Use the down arrow to change the "Connect Using"
    setting to com1 or com2 (com port for RS-232C cable connection to the LanProbe).

f. Select "Configure...".

    Configure Port Settings to;
        Bits per second - 9600
        Data bits   -   8
        Parity   -   None
        Stop Bits -   1
        Flow Control - Xon/Xoff

g. Select "OK".

4. Connect the power cord to apply power to the LanProbe

5. Erase the Flash. At the Debug prompt =>. Type ef and then press the "Enter" key.

    Example;

    =>ef (Enter)

    The text "Erase Flash: Programming Zeros..." will be displayed. When the Flash
    is completely erased, the text "Erase Flash: Programming Zeros...Erasing...Done."
    will be displayed.

6. Change the 4986A baud rate to 9600. At the Debug prompt =>. Type ba 9600 and then
    press the "Enter" key.

    Example;

    =>ba 9600 (Enter)

7. Download to Flash. At the Debug prompt =>. Type df and then press the "Enter" key.

    Example;

    =>df (Enter)

    The text "Downloading to Flash: Receiving File..." will be displayed.

8. Transfer the firmware file.

    Using the Windows Terminal Program

    a. From the Terminal menu; Select Transfers, Send Binary files. .The "Send Binary File" window will open.

    b. Select the firmware filename from its file location/directory and press "Okay." The firmware file will be transfered to the LanProbe.

    Caution!   Do not remove power from the 4986A.

    c. Continue to step 9.

    Using the Windows HyperTerminal Program

    a. From the "New Connection - HyperTerminal" menu; Select Transfer.

    b. In the "Send File" window; Select the firmware filename from its file location/directory.

    c. Use the down arrow to change the Protocol to XMODEM.

    d. Select "Send". The "Xmodem file send" window will be displayed. The firmware file will be transfered to the LanProbe.

    Caution! Do not remove power from the 4986A.

    e. Continue to step 9.

9. When the firmware download is finished. The following text will be displayed.
    "Receive File Complete."
    "Programming Flash...Complete."

10. Reset the probe and exit the Debugger. At the Debug prompt =>. Type rs and then press the "Enter" key.

    Example;

    =>rs (Enter)

    The 4986A will reboot and display the Power-On Self Test (POST). The Application will load and the 4986A banner will be displayed.

    Example 4986A output shown below.

512K Flash Found
4M DRAM Found
128K BRAM Found
Upper DRAM: testing...Okay
RTC NVRAM: testing...Okay
RTC Clock: testing...Okay
BRAM: testing...
BRAM: testing...Okay
Timer0/Slicer: testing...Okay
Timer1: testing...Okay
LAN Controller: testing...Okay
SCC Interrupts: testing...Okay
Watchdog: testing...Okay
Application Header Found. Checksum...Okay.
Copying Application ROM to RAM...Done
Jumping to Application...

POST completed successfully.
Node Locator II successfully loaded
LanProbe III Ver. A.01.02, (Boot ROM A.00.01 4M)
IEEE 802.3/Ethernet, Network Monitor, MIB-II, RMON
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11. Firmware download is complete. Remove power from the 4986A