FLUKE®

8845A/8846A Firmware Update Utility

Instruction Sheet

Introduction

The instructions in this document are for updating the firmware in a Fluke 8845A or 8846A Digital Multimeter (hereafter the Meter). These instructions are for updating Meters having OutGuard (OutG) versions below 2.10.882.24 and InGuard (InG) versions below ad300210.

⚠ Caution

To avoid having the Meter become inoperable, all instructions must be followed carefully and power must not be interrupted during the upgrade process. Any failure during the update process may require the Meter be sent to an authorized Fluke service center for repair. Repairing the Meter for faults caused during this upgrade are not covered by the warranty.

To check the InGuard and OutGuard versions installed in the Meter:

1. Press INSTR SETUP.
2. Press the softkey under SYSTEM.
3. Press the softkey under VERSIONS + SN.

   The display shows the OutGuard (OutG SW) and InGuard (InG SW) firmware versions.

For questions about this upgrade, contact Fluke Support at 1-425-446-6889 or email PDMMsupport@fluke.com.

Before Starting

The firmware must be loaded into the Meter through its Ethernet (LAN) connector on the rear panel. If the Meter is already connected to a network, it may be possible to update the Meter through this same connection. If not, then the Meter must be connected to a PC with the following:

- Windows XP or 2000 Professional operating system
- 110 megabytes of free disk space
- An Ethernet connection (internal NIC or external adapter)
- Network switch/hub and/or network cables

Installing the Update Utility

The update program must be installed on the PC or system to which the Meter is connected. Do the following to install the updater program.

1. Download the installation program by clicking on the "Download the Software Upgrade file" link on the 8845A/46A 6.5 Digit Multimeter Firmware Upgrade Web page.
2. Navigate to the location on the PC where the installation program was downloaded and double click on "install.exe".
3. Click on Next as needed during the installation process.
4. Click on Done in the Installation Complete dialog box,

The Firmware Update utility program is installed in the Fluke Instrument Firmware Updater program group under the start menu.

Establishing Communication with the Meter

If a LAN (Ethernet) connection is already connected to and set up on the Meter, use it to perform the firmware update. If not, refer to the "Communication Setup" section below for communication set up and then continue with the steps below.

Once LAN (Ethernet) communication with the meter is set up, perform the following steps:

1. Ensure the network cable is connected to the LAN Ethernet port on the Meter.
2. Turn on the Meter and wait for the Meter to complete its power-up tests.
3. Press INSTR SETUP.
4. Press the softkey under COMMANDS.
5. Press the softkey under 8845 or 8846.
6. Press INSTR SETUP.
7. Press the softkey under PORT IF.
8. Press the softkey under SELECT PORT.
9. Press the softkey under LAN.
10. Press INSTR SETUP.
11. Press the softkey under PORT IF.
12. Press the softkey under LAN.
13. Press the softkey under IP_ADDR to display the IP address. Note the IP address for use later.
14. Press BACK.
15. Press the softkey under MORE.
16. Press the softkey under PORT #. Note the port number for later use.
17. Run the firmware update program as described in the "Installing the New Firmware into the Meter" section below.

Installing the New Firmware into the Meter

With the Meter setup and communicating with the PC or System, the new Firmware can be installed into the Meter by performing the following:

1. Start the installation process on the PC by clicking **Start**, point to **All Programs**, point to **Fluke Instrument Firmware Updater**, and then click **Firmware Update**.

Follow the prompts in the Firmware Update program, entering the IP address and port information for the Meter when requested.

Be careful to follow the program's instructions carefully, including turning the power off and back on and pressing the continue button exactly as instructed.

Calibration

The 8845A/46A will retain all of the calibration values after the firmware update. However, released firmware versions 1 & 2 (see the included file Software versions.pdf) will require calibration of the new dc/ac 400 mA range and for the dc/dc ratio function. Contact an authorized Fluke Service Center for this calibration.

Communication Setup

There are two different ways to connect the Meter to the PC using this method. The first connection possibility is to connect the Ethernet port on the Meter directly to the Network port on the PC using a crossover Ethernet cable.

Note

Using a standard network patch cable directly between the Meter and the PC will not work.

The alternative method is to obtain a network switch or hub along with two Cat-5 Ethernet cables. Use one cable to connect one port of the switch or hub to the network port on the PC. Use the other cable to connect another switch or hub port to the Ethernet (LAN) Port on the Meter. No other connections should be made to the switch or hub.

1. Open a command prompt (DOS) window on the PC by clicking **Start**, point to **All Programs**, point to **Accessories**, and then click **Command Prompt**.
2. Type "ipconfig" <Enter>.
3. Browse the ipconfig listing and look for a line that looks like:

   IP Address…….: 169.254.115.202

   Note the IP Address number. Close the command prompt window.
4. Turn the Meter on and wait for measurements to be displayed.
5. Press INSTR SETUP.
6. Press the softkey under PORT IF.
7. Press the softkey under SELECT PORT.
8. Press the softkey under LAN.
9. Press INSTR SETUP.
10. Press the softkey under PORT IF.
11. Press the softkey under LAN. If DHCP is highlighted, press the softkey under DCHP to turn it off.

12. Press the softkey under IP_ADDR to display the IP address.
13. Select an IP address that has the same first three numbers as the PC IP address found in step 3 above, but with a different last number. For example, if the IP address in the PC was 169.254.115.202, use an address 169.254.115.xxx, where xxx can be 1- 255, but not 202.
14. Input this IP address using the F1 through F4 softkeys.
15. Press the softkey under ENTER.
16. Press the softkey under NETMASK.
17. Input a Netmask value of 255.255.255.000 using the F1 through F4 softkeys.
18. Press the softkey under ENTER.
19. Press the softkey under MORE.
20. Press the softkey under PORT.
21. Set the port number to 03490 using the F1 through F4 softkeys.
22. Press the softkey under ENTER.
23. Turn the Meter off and then back on using the rear-panel power switch and wait for measurements to be displayed. Do not use the front panel switch.

To continue, go back to the "Establishing Communication with the Meter" section.

Troubleshooting

To test the connection between the PC and the Meter:

1. Open a command prompt (DOS) window on the PC by clicking **Start**, point to **All Programs**, point to **Accessories**, and then click **Command Prompt**.
2. In the DOS window type "ping " followed by the IP address of the Meter. For example: "ping 169.254.115.210".

   "(0% loss) should be displayed on the PC. A "Request timed out" response message indicates the communication is not working. See the "Communication Setup" section of this document.
3. Type "telnet " followed by the IP address of the Meter and the port number 3490. For example: "telnet 169.254.115.210 3490".
4. Type "*idn?" <Enter>

Note

Windows may not echo what you type.

Typical response to the *idn? Command is:

FLUKE, 8846A, 9471012, 02/14/08-08:54

Note

The second set of numbers (9471012 in the above example) is the serial number of the Meter.

Verify proper communication with the Meter by:

5. Press INSTR SETUP.
6. Press the softkey under SYSTEM.
7. Press the softkey under VERSIONS + SN.

If the serial number displayed in the Meter's display is the same as the serial number returned in step 4 above, then communication has been established between the PC or system and the Meter.

Note

Insure the DOS Prompt window is closed before starting the update process. Failure to do so will prevent the Firmware Update program from connecting to the Meter.

If communications between the Meter and the PC or system cannot be established, as indicated by a lack of *idn? response or incorrect serial number returned, then check the IP address of the PC and the Meter to be sure they are appropriate for the method of connection used above.

Every effort has been made to provide an easy update process. However, in the event the update process is interrupted or prematurely terminated, the instrument may not boot up properly. If this happens, the instrument must be sent to the Fluke Service Center at the following location:

http://us.fluke.com/usen/Service/service/CustomerSupportServices.htm

or

http://us.fluke.com/usen/Service/ServiceCenters/Service-US.htm

or Phone 1-888-993-5853