

Fluke 8845A/8846A Firmware Upgrade Instructions

Version 1.1 (April 2007)

These are instructions to upgrade the firmware in a Fluke 8845A or 8846A meter. This upgrade loads both the Outguard and Inguard firmware, upgrading them to OutG version 1.0.688.18 and InG version ad000130.

The firmware update can only be done through the Ethernet LAN port. A direct connection from the meter to the PC through the Ethernet ports is recommended but indirect methods using a system network are also discussed. The Communication Setup section below contains the instructions to set up 8845A/8846A Ethernet direct communication.

Note: Be careful not to turn off the 8845A/8846A meter or otherwise interrupt the firmware upgrade. Incomplete firmware upgrades can cause the meter to be unable to start up. If that happens, the meter must be returned to Fluke for complete firmware reload.

If you have questions or issues with this upgrade, or other technical questions on the 8845A/8846A models, call Fluke FPM Support at 1-425-446-4252 or email 'metsupport@fluke.com'.

Extract Firmware Upgrade Files:

Extract the following files from the ZIP archive "Fluke884XADownload.zip" into a folder on your PC (for example, "C:\dwnld"):

- 884xUpgr.bat (*use only for the direct connect method*)
- Fluke884xFirmwareUpgradeBugList (list of bugs and enhancements in this release)
- Fluke884xFirmwareUpgrade (these instructions)
- FTPLib.dll
- REMLib.dll
- u69_nios.flash (Inguard file)
- upgew.exe
- vcredist_x86.exe (free Microsoft visual.net runtime distribution file)
- zfp (Outguard file with date 04/02/2007)

Communication Setup:

To run the upgrade program, you must know the Internet Protocol (IP) address of the 8845A/8846A and have the meter set up to communicate to a PC through the Ethernet LAN port. The steps below describe how to set the network settings in Windows and the IP address in the 8845A/8846A.

1) Direct Connect Method

Note that to connect directly from the PC to the 8845A/8846A meter, you must use a Crossover Ethernet cable (also called "cross wired" or "cross-pinned"). A standard straight-through network patch cable will not work.

Connect a Crossover Ethernet cable from the meter's LAN port to the network port on the PC.

Setup the PC:

Note: To perform these steps below, you need Administrator permissions on the PC.

If you do not, contact your PC Support personnel or IT group for assistance.

1. In Windows XP, click **Start**, and select **Settings** and **Network Connections**
2. Right click on **Local Area Connection** and select **Properties**
3. Scroll and select **Internet Protocol (TCP/IP)** and click on **Properties**
(Note the original IP settings so you can restore the PC to its original state)
4. Select "**Use the Following IP Address**"
5. Type in the following IP address: 192.168.10.10
6. Tab to the Subnet mask and check it is set to 255.255.255.0
7. Press **OK** to finish, and **OK** again then exit from **Network Connections**
8. Restart the PC

8845A/8846A Setup:

To setup the 8845A/8846A meter to work with Ethernet, you need to change the instrument setup to LAN using the following front panel selections:

INSTR SETUP
PORT IF
SELECT PORT
LAN

To set the IP address of the meter, use the following front panel selections:

INSTR SETUP
PORT IF
LAN
IP_ADDR

Meter displays nnn.nnn.nnn.nnn (the existing IP address setting).

Set the IP address to 192.168.10.230. To set the address, use the <-- [F1] and --> [F4] softkeys to move the cursor to each number and the ++ [F3] and -- [F2] softkeys to increment or decrement that number, then press the ENTER [F5] softkey when the IP address is correct.

Check the meter's DHCP setting: if **DHCP** is highlighted in the LAN menu, press the DHCP [F1] softkey to turn it off.

Restart the 8845A/8846A by cycling the power off and back on; be sure to use the power switch on the rear panel, not the green power button on the front panel.

Perform the Firmware Upgrade:

The upgrade program only works in the MS-DOS command prompt window. The command prompt program is available as part of the MS Windows interface. As an example, on a PC with Windows XP press **Start**, then select **All Programs** (or **Programs**), next the **Accessories** group, and finally **Command Prompt**.

First, go into the MS-DOS command prompt window and change directory to the folder where the firmware upgrade files were extracted. For example, enter

"C:" (and press Enter), then

"cd C:\dwnld"

Now that you are in the folder containing the upgrade files, enter the following command to run the upgrade:

"884xUpgr.bat"

If a Microsoft Visual C++ License window pops up, click the Yes button to accept the license agreement and continue.

When prompted, make sure that:

- a) The Ethernet connection is setup properly.
- b) The meter is powered up.
- c) Ethernet is selected as the remote interface port on the meter

Type "y" and Enter to proceed (or any other key to exit).

The upgrade program will connect to the meter's remote interface, and display the Current Version information.

Type "y" and Enter to proceed (or any other key to exit).

The program will transfer the Inguard file to the meter and initiate it.

Next, the program will transfer the Outguard file and initiate it.

Note that firmware upgrades can take up to 20 minutes to complete.

After the upgrade of both the Inguard and Outguard firmware is finished, you must turn the 8845A/8846A power off and then back on to run the new firmware version.

When the upgrade is done, type "exit" in the MS-DOS Command Prompt window to close it.

Check the upgrade:

After the 8845A/8846A meter powers up, check the internal firmware versions against the upgrade versions using the front panel keys as follows:

```
INSTR SETUP
SYSTEM
VERSIONS +SN
```

If correctly upgraded, the meter should show the following:

```
INSTR SYSTEM VERSION
OutG SW = 1.0.688.18   04/02/07-08:12
InG SW = ad000130    10/06/06-22:22
OutG HW = 7b27e634   09/26/06-15:16
InG HW = e4112603   09/26/06-15:23
Serial # = xxxxxxx   OS = Sep 27 2006
```

2) Indirect Connect Method

Note that both your PC and the 8845A/8846A meter must be connected to the internet system.

Method 1: Connection using DHCP (*Dynamic Host Configuration Protocol*)

8845A/8846A Setup:

To setup the 8845A/8846A meter to work with Ethernet, you need to change the instrument setup to LAN using the following front panel selections:

INSTR SETUP
PORT IF
SELECT PORT
LAN

To check the IP address of the meter set by the DHCP server, use the following front panel selections:

INSTR SETUP
PORT IF
LAN
Check that DHCP is highlighted
IP_ADDR

Meter displays nnn.nnn.nnn.nnn (the IP address set by DHCP – note this for later).

Note: DHCP highlight must be ON to indicate that DHCP is active. If it is not highlighted, in the LAN menu, press the DHCP [F1] softkey to turn it ON. Turn off power at the rear of the meter and turn back on to communicate with the DHCP server. Once re-powered, you will need to re-examine and note the IP address.

Perform the Firmware Upgrade:

The upgrade program only works in the MS-DOS command prompt window. The command prompt program is available as part of the MS Windows interface. As an example, on a PC with Windows XP press **Start**, then select **All Programs** (or **Programs**), next the **Accessories** group, and finally **Command Prompt**.

First, go into the MS-DOS command prompt window and change directory to the folder where the firmware upgrade files were extracted. For example, enter

```
"C:" (and press Enter), then  
"cd C:\downld"
```

Now that you are in the folder containing the upgrade files, **enter the following command at the DOS prompt:** vcredist_x86.exe.

When the Microsoft Visual C++ License window pops up, click the Yes button to accept the license agreement and continue.

To launch the installation program, at the DOS prompt enter:

```
upgew.exe igog -t nnn.nnn.nnn.nnn -g u69_nios.flash -o zfp
```

nnn.nnn.nnn.nnn is the Ethernet address noted above. Note that the Ethernet protocol does not recognize leading zeros in the last three digits. If the last three digits of the IP address begin with a zero, you should only enter in the last two digits.

When prompted, make sure that:

- a) The Ethernet connection is setup properly.
- b) The meter is powered up.

c) Ethernet is selected as the remote interface port on the meter
Type "y" and Enter to proceed (or any other key to exit).

The upgrade program will connect to the meter's remote interface, and display the Current Version information.

Type "y" and Enter to proceed (or any other key to exit).

The program will transfer the Inguard file to the meter and initiate it.
Next, the program will transfer the Outguard file and initiate it.
Note that firmware upgrades can take up to 20 minutes to complete.

After the upgrade of both the Inguard and Outguard firmware is finished, you must turn the 8845A/8846A power off at the rear of the instrument and then back on to run the new firmware version.

When the upgrade is done, type "exit" in the MS-DOS Command Prompt window to close it.

Check the upgrade:

After the 8845A/8846A meter powers up, check the internal firmware versions against the upgrade versions using the front panel keys as follows:

```
INSTR SETUP  
SYSTEM  
VERSIONS +SN
```

If correctly upgraded, the meter should show the following:

```
INSTR SYSTEM VERSION  
OutG SW = 1.0.688.18    04/02/07-08:12  
InG SW = ad000130     10/06/06-22:22  
OutG HW = 7b27e634    09/26/06-15:16  
InG HW = e4112603     09/26/06-15:23  
Serial # = xxxxxxxx   OS = Sep 27 2006
```

Method 2: Connection using NO DHCP

Note: DHCP highlight must be OFF to indicate DHCP is inactive.

System Network:

*Note: To perform these steps below, you may need Administrator to provide a usable IP address.
Contact your PC Support personnel or IT group for assistance.*

8845A/8846A Setup:

To setup the 8845A/8846A meter to work with Ethernet, you need to change the instrument setup to LAN using the following front panel selections:

```
INSTR SETUP  
PORT IF  
SELECT PORT  
LAN
```

To set the IP address of the meter, use the following front panel selections:

INSTR SETUP

PORT IF

LAN

Check that DHCP is not highlighted

IP_ADDR

Meter displays nnn.nnn.nnn.nnn (the existing IP address setting).

Check the meter's DHCP setting: if **DHCP** is highlighted in the LAN menu, press the DHCP [F1] softkey to turn it off.

Set the IP address to xxx.xxx.xxx.xxx, the IP address provided by your administrator. To set the address, use the <- - [F1] and - -> [F4] softkeys to move the cursor to each number and the ++ [F3] and -- [F2] softkeys to increment or decrement that number, then press the ENTER [F5] softkey when the IP address is correct.

Turn off power at the rear of the meter and turn back on to set the new IP address.

Perform the Firmware Upgrade:

The upgrade program only works in the MS-DOS command prompt window. The command prompt program is available as part of the MS Windows interface. As an example, on a PC with Windows XP press Start, then select All Programs (or Programs), next the Accessories group, and finally Command Prompt.

First, go into the MS-DOS command prompt window and change directory to the folder where the firmware upgrade files were extracted. For example, enter

```
"C:" (and press Enter), then
```

```
"cd C:\downld"
```

Now that you are in the folder containing the upgrade files, enter the following command at the DOS prompt: vcredist_x86.exe.

When the Microsoft Visual C++ License window pops up, click the Yes button to accept the license agreement and continue.

To launch the installation program, at the DOS prompt enter:

```
upgew.exe igog -t xxx.xxx.xxx.xxx -g u69_nios.flash -o zfp
```

xxx.xxx.xxx.xxx is the Ethernet address noted above. Note that the Ethernet protocol does not recognize leading zeros in the last three digits. If the last three digits of the IP address begin with a zero, you should only enter in the last two digits.

When prompted, make sure that:

- a) The Ethernet connection is setup properly.
- b) The meter is powered up.
- c) Ethernet is selected as the remote interface port on the meter

Type "Y" and Enter to proceed (or any other key to exit).

The upgrade program will connect to the meter's remote interface, and display the Current Version information.

Type "Y" and Enter to proceed (or any other key to exit).

The program will transfer the Inguard file to the meter and initiate it.
Next, the program will transfer the Outguard file and initiate it.
Note that firmware upgrades can take up to 20 minutes to complete.

After the upgrade of both the Inguard and Outguard firmware is finished, you must turn the 8845A/8846A power off at the rear of the instrument and then back on to run the new firmware version.

When the upgrade is done, type "exit" in the MS-DOS Command Prompt window to close it.

Check the upgrade:

After the 8845A/8846A meter powers up, check the internal firmware versions against the upgrade versions using the front panel keys as follows:

```
INSTR SETUP
SYSTEM
VERSIONS +SN
```

If correctly upgraded, the meter should show the following:

```
INSTR SYSTEM VERSION
OutG SW = 1.0.688.18    04/02/07-08:12
InG SW = ad000130     10/06/06-22:22
OutG HW = 7b27e634    09/26/06-15:16
InG HW = e4112603     09/26/06-15:23
Serial # = xxxxxxxx   OS = Sep 27 2006
```