

Model 3000 Demo v1.1 Program

The Model 3000 Demo v1.1 program is a standalone application that demonstrates the basic features of the Model 3000 Digital Capacitance Meter and USB control under LabVIEW®. The demonstration program is written in LabVIEW® 7 and compiled with National Instruments' (www.ni.com) Application Builder. Users without LabVIEW® 7 can run the application by installing the free LabVIEW® runtime engine included on the Model 3000 application CD.

When the demonstration program is launched, a virtual Model 3000 front panel is displayed along with additional functions that include plots of the meter readings and histogram, offset adjustments, sample rate, and data logging to disk file. For many users, the Model 3000 Demo v1.1 program maybe all that is needed to acquire and store data.

For users who wish to customize the demonstration program or write their own virtual instrument program, a complete set of LabVIEW® 7 VIs are available on the Model 3000 application CD or can be downloaded from our website:

www.glkinst.com/cmetersoftware/LabVIEW7VIs.zip

To get started, follow the instructions below to unzip and install the “Model 3000 Demo v1.1.exe” program and the LabVIEW® 7 runtime engine. For users who own LabVIEW® 7, the runtime engine is already installed. There is no need to run the installer; simply launch the “Model 3000 Demo v1.1.exe” program after installation. For standalone applications and users without LabVIEW® 7, you will need to install the runtime engine (see below).

Quick Start for Existing LabVIEW® 7 Installations:

If you already have LabVIEW® 7 installed, copy all of the files and subdirectories in the Model 3000 applications CD directory \LabVIEW7DemoPrograms\ to a local directory on your computer such as \LabVIEW Data\app\. Alternatively, they can be downloaded from our website:

www.glkinst.com/cmetersoftware/LabVIEW7DemoPrograms/

These are the files and subdirectories that should be copied to your computer:

LabVIEW Data\app\CmtrData.txt
LabVIEW Data\app\Fonts\
LabVIEW Data\app\Model 3000 Demo v1.1.ini
LabVIEW Data\app\Model 3000 Demo v1.1.exe
LabVIEW Data\app\Readmefirst.txt
LabVIEW Data\app\Readmefirst.pdf

Open the directory LabVIEW Data\app\Fonts\ and copy fonts “OPTIMI.TTF” and “OPTIM.TTF” to your C:\WINDOWS\Fonts\ directory or to the location of the fonts on your computer. This completes the installation.

Connect the Model 3000 to the USB port on your computer. The Model 3000 is powered-up as soon as it is connected to a USB port. Make sure the USB drivers were installed properly. You can check the status of the USB drivers by looking at the “Device

Manager” in the “Computer Management” console in Windows XP®. Launch the “Model 3000 Demo v1.1.exe” program, and a LabVIEW® 7 virtual instrument panel will appear. The panel should look identical to the screen shown in the link below:

www.glkinst.com/cmetersoftware/LabVIEWScreenShots/image002.jpg

You are ready to exercise the meter and store data to disk files. The file “CmtrData.txt” contains example data collected previously by using options to “Write Data to File” or to “Append Data”. The data are stored in tab-delimited format for easy input to a spreadsheet.

Note: You must select each range manually from the instrument front panel; the range switch is not programmable through software.

Installation for Users without LabVIEW® 7:

Unzip the installation program “LabVIEW7DemoInstallation.zip” to a local directory. This file can be found on the Model 3000 application CD or can be downloaded from our website:

www.glkinst.com/cmetersoftware/LabVIEW7DemoInstallation.zip

All files will be placed in a directory called LabVIEW Data\app\. The directory will contain the following programs and subdirectories:

```
data\  
Fonts\  
Installer\  
Model 3000 Demo v1.1.exe  
Model 3000 Demo v1.1.ini  
Readmefirst.txt  
Readmefirst.pdf
```

Open the directory LabVIEW Data\app\Fonts\ and copy fonts “OPTIMI.TTF” and “OPTIM.TTF” to your C:\WINDOWS\Fonts\ directory or to the location of the fonts on your computer. Change to the installer directory LabVIEW Data\app\Installer\ and run “setup.exe”. Upon completion of the setup program, the LabVIEW® 7 runtime engine is installed. This completes the installation. Connect the Model 3000 to the USB port on your computer and follow the instructions in the Quick Start section above to exercise the Model 3000 Digital Capacitance Meter.

Note: USB drivers for Model 3000 Digital Capacitance Meter must be installed on your computer for LabVIEW® 7 to recognize and communicate with the instrument. USB drivers and installation procedure are available on the Model 3000 application CD or can be downloaded from our website:

www.glkinst.com/cmetersoftware/USBDriverRev100103.zip

The USB port on the Model 3000 uses the DLP-2232M module and FTDI FT2232C chip. The most recent information and drivers can be found on their websites:

www.dlpdesign.com/usb/2232m.html
www.ftdichip.com/Drivers/FT2232CDrivers.htm

Note: All software and drivers for the Model 3000 have been tested only on computers running Microsoft's Windows XP® Professional and Home editions. All of the Model 3000 and FTDI VI's were written in LabVIEW® 7 and will not run in earlier versions of LabVIEW®. Contact National Instruments, www.ni.com, to upgrade to version 7 or later.
