

WHERE TO START WITH YOUR NI 5102

The following sections explain how to begin using your NI 5102 device.

Set Up and Test Using Windows 95/98/NT

The following instructions describe how to set up and test your NI 5102 device for Windows 95/98/NT. If you are using Windows 3.x, refer to the *Set Up and Test Using Windows 3.x* section.

1. Install VirtualBench-Scope.

This software is included in your NI 5102 kit so that you can interactively use your NI 5102 device as a stand-alone oscilloscope. However, this is only one of your options. If you prefer to program your NI 5102 device for a specific application, see the *Programming Options* section in this document.

- a. Insert your VirtualBench CD into your CD-ROM drive. Click on the **Install VirtualBench** option from the installation window that appears on your computer screen. When you are asked to select your **VirtualBench Setup Options**, select **5102 Digitizing Oscilloscope**.
- b. Complete the installation by following the instructions that appear in the dialog boxes.

2. Install NI-DAQ.

- a. Insert your NI-DAQ CD into your CD-ROM drive. Click on the **Install NI-DAQ** option from the installation window that appears on your computer screen. Select the **NI-DAQ Driver Files** checkbox from the **Select Components** installation screen.
- b. Complete the installation by following the instructions that appear in the dialog boxes.



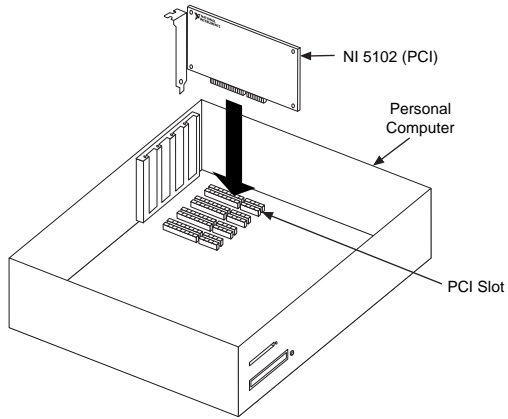
For more information on installing VirtualBench, refer to *Getting Started with VirtualBench*.

3. Install your NI 5102 device. The following figures illustrate the NI 5102 hardware installation.

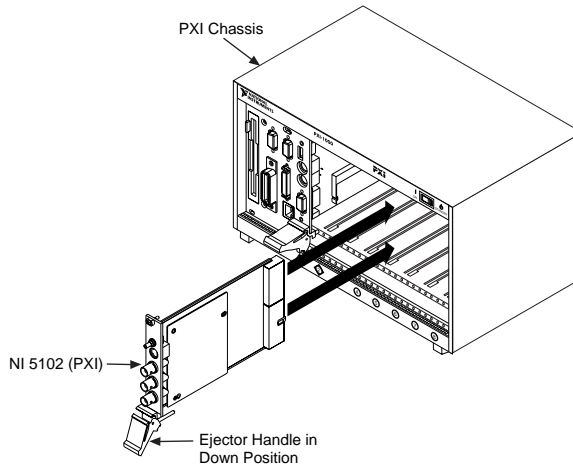


Caution *You must turn off your PC or chassis before installing your NI 5102 device.*

◆ **NI 5102 (PCI)**

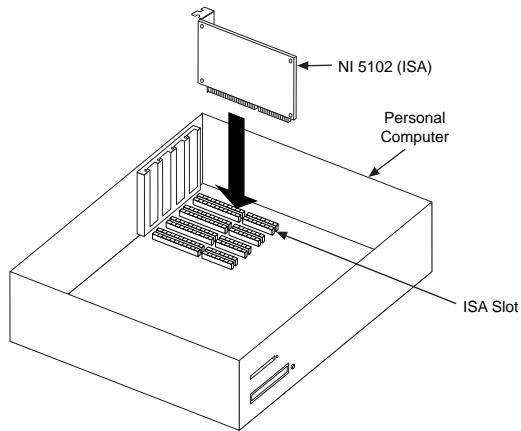


◆ **NI 5102 (PXI)**

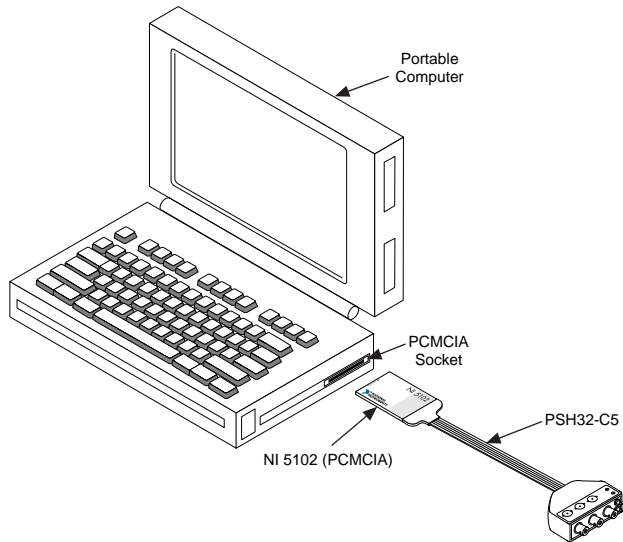


For more information on hardware installation, refer to the *NI 5102 User Manual*.

◆ **NI 5102 (ISA)**



◆ **NI 5102 (PCMCIA)**



For more information on hardware installation, refer to the *NI 5102 User Manual*.

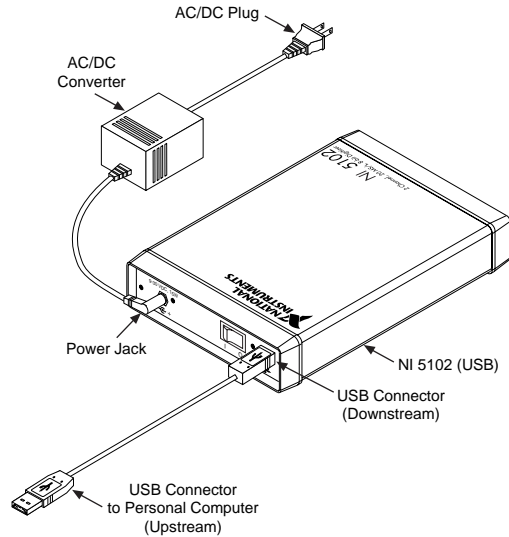
◆ NI 5102 (USB)

Connect the AC/DC supply to a power outlet and connect the NI 5102 (USB) to the PC with the USB cable. Flip the rocker switch to the ON position.



Note

You do not need to turn off your computer before connecting the USB connector.



4. Run the Measurement & Automation Explorer to configure and test your NI 5102 device.
 - a. To launch the Measurement & Automation Explorer, double-click on the **Measurement & Automation** icon on the desktop.
 - b. Double-click on the **Devices** icon to open the list of recognized devices.
 - c. Find the device in the list which corresponds to your NI 5102. Note the device number your device has been assigned. You will need to use this device number when you program your device.
 - d. Right-click on the device and select **properties** from the menu.



For more information on hardware installation, refer to the *NI 5102 User Manual*.

**Note**

The following example shows an NI 5102 (PCI) device. However, the procedure is identical for testing all NI 5102 devices.

- e. From the **Properties** window, click on the **Test Resources** button to test the NI 5102 resources. A dialog box appears and indicates if the resource test has passed.
- f. Click on **Run Test Panels** to run the functional test panels and begin using your NI 5102 device. Connect your signal to the CH0 or CH1 input from the **Channel** setting and select **One Shot** or **Continuous** mode. Then click on **Start** to begin acquiring data.

You have successfully installed and configured the necessary software and hardware to use your NI 5102 device with VirtualBench-Scope.

5. Launch VirtualBench-Scope. Open VirtualBench-Scope from the **Start»Program»VirtualBench** menu to use your NI 5102 device as a standalone oscilloscope.

Set Up and Test Using Windows 3.x

The following instructions describe how to set up and test your NI 5102 for Windows 3.x.

**Note**

Windows 3.x supports NI 5102 (PCI, ISA, PCMCIA) only.

1. Install VirtualBench-Scope.

This software is included in your NI 5102 kit so that you can interactively use your NI 5102 device as a standalone oscilloscope. However, this is only one of your options. If you prefer to program your NI 5102 device for a specific application, see the *Programming Options* section in this document.

- a. Insert your VirtualBench CD into your CD-ROM drive.
- b. Click on **File»Run** in the **Program Manager** window. Type `D:\vbench20\win31\disk1\setup` in the command line, where the letter *D* represents the drive letter for your CD-ROM drive.
- c. Select the **VirtualBench-Scope** checkbox in the **Select Components** window and deselect all other options.
- d. Complete the installation by following the instructions that appear in the dialog boxes.

2. Install NI-DAQ 5.0 which supports Windows 3.x.
 - a. Insert your NI-DAQ CD into your CD-ROM drive. Click on the **Install NI-DAQ** option from the installation window that appears on your computer screen. Select the **NI-DAQ Driver Files** checkbox from the **Select Components** installation screen.
 - b. Complete the installation by following the instructions that appear in the dialog boxes.
3. Install your NI 5102 device.
4. Run the NI-DAQ Configuration Utility to configure and test your NI 5102 device. (If you need help during the configuration and testing process, open the NI-DAQ Configuration Utility online help file by selecting **Help Topics** from the **Help** menu.)
 - a. Double click on the NI-DAQ Configuration Utility icon in the **NI-DAQ for Windows** program group.
 - b. If your computer detects the NI 5102 device you installed, the **Found New NI-DAQ Hardware** window opens. Assign a device number to your NI 5102 device. You will use this device number to access your NI 5102 device from software applications.

If you are using an NI 5102 (PCMCIA), you need to add the device manually by clicking on the **ADD** button and selecting NI 5102 (PCMCIA) from the list of available DAQCards.
 - c. Highlight your NI 5102 device in the **NI-DAQ Devices** list and click on the **Configure** button.
 - d. NI 5102 (ISA, PCMCIA) only—From the **Configuring Device** window, modify resources as necessary in the **System** tab.
 - e. Click on the **Test** button to test the NI 5102 device resources. A dialog box appears and indicates if the resource test has passed.
 - f. Click on **Close** when you finish testing your NI 5102 device.

You have successfully installed and configured the necessary software and hardware to use your NI 5102 device with VirtualBench-Scope.
5. Save your NI 5102 device configuration. Select the **Save** option in the **File** menu.
6. Launch VirtualBench-Scope. Double-click on the **VirtualBench-Scope** icon in the **VirtualBench** program group to use your NI 5102 device as a standalone oscilloscope.

Programming Options

You can control the NI 5102 device programmatically to develop custom testing applications. The NI 5102 is supplied with an easy to use instrument driver that controls many common scope functions from an Application Development Environment (ADE). The supported ADEs include LabVIEW, LabWindows/CVI, and other C or C++ environments.

The following instructions describe how to set up your NI 5102 programming option.

1. Install your ADE, if you have not already done so.
2. If applicable, install the instrument driver software from disk 1 of the *NI 5102 Instrument Driver* disk set in your kit.
3. Refer to the *National Instruments SCOPE Help* file (NISCOPE Help) in the **Start»Programs»Niscope** menu for more information on programming your NI 5102 device with the instrument driver.



For more information on programming options, refer to the *NI 5102 User Manual*.



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