

# WHERE TO START WITH YOUR NATIONAL INSTRUMENTS OSCILLOSCOPE/DIGITIZER

This document explains how to begin using your oscilloscope/digitizer.

## Installing the Software and Hardware

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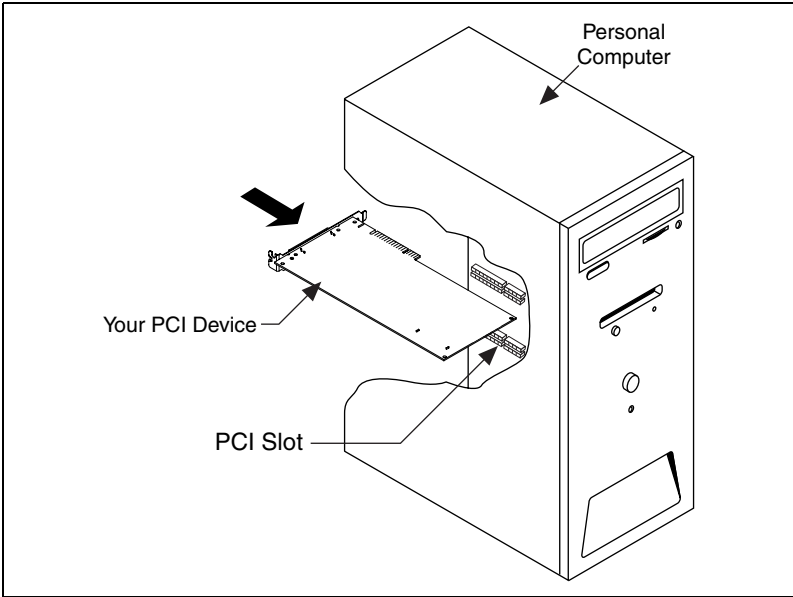
The following instructions describe how to set up your oscilloscope/digitizer:

1. If you are using an application development environment (ADE) or third-party tool, install it now if you have not already done so. The supported ADEs include LabVIEW, LabWindows/CVI, Visual Basic, and other C or C++ environments.
2. Install the NI-SCOPE software. The software CD includes the software you need to configure, test, and program the operation of your device.
  - a. Insert your National Instruments SCOPE software CD into your CD-ROM drive. Click the **Install Software** option from the installation window.
  - b. To install the instrument driver, ADE examples, and VirtualBench-Scope soft front panel, choose the **Programmatic and Interactive Support** option when prompted. To install only the VirtualBench-Scope soft front panel, choose the **Interactive Support Only** option.

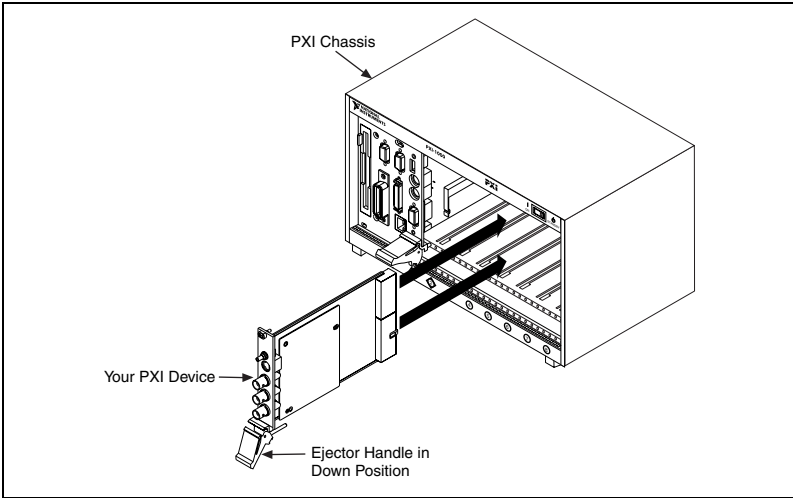


**Caution** You must turn off and unplug your PC or chassis before installing your device. To prevent damage due to electrostatic discharge or contamination, handle the device using the edges or the metal bracket.

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

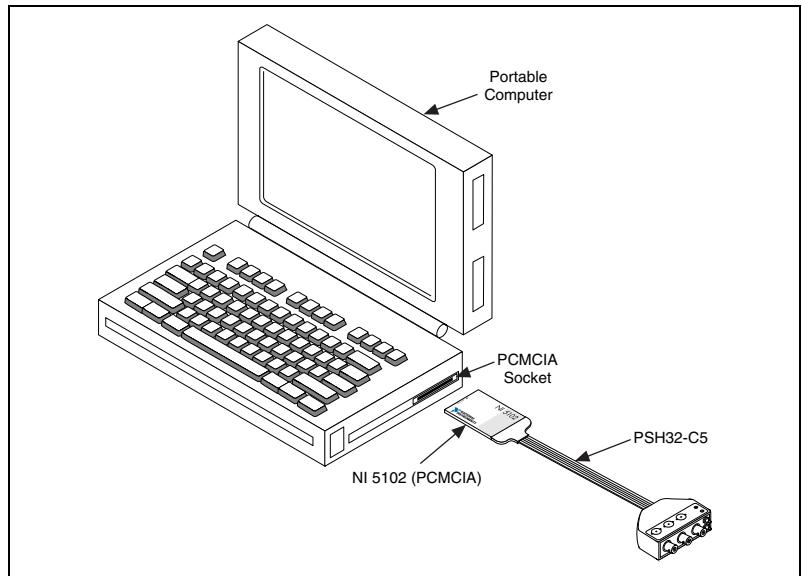


**Figure 1. PCI Installation**



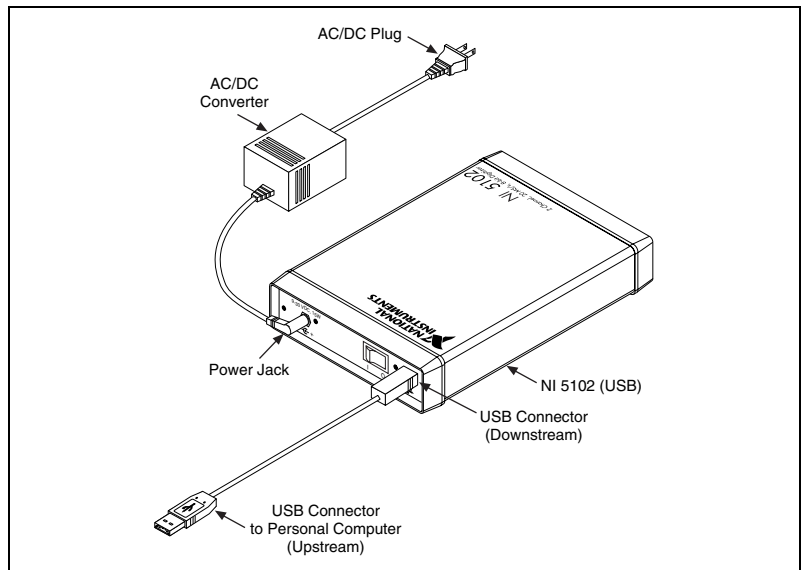
**Figure 2. PXI Installation**

◆ PCMCIA for the NI 5102



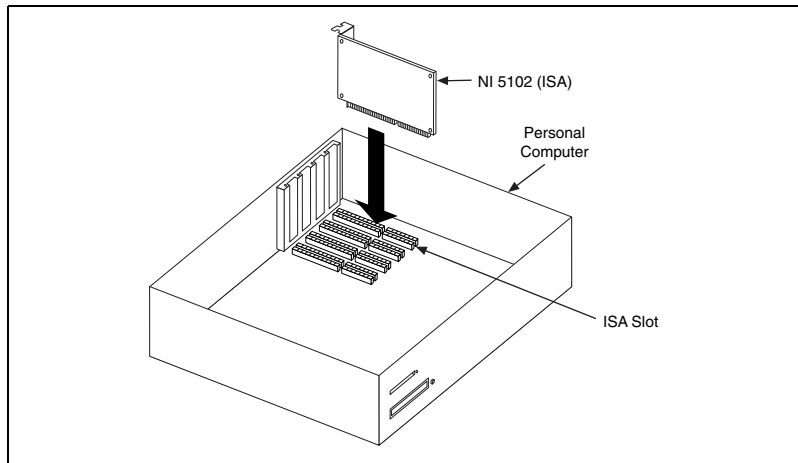
**Figure 3.** PCMCIA Installation

◆ USB for the NI 5102



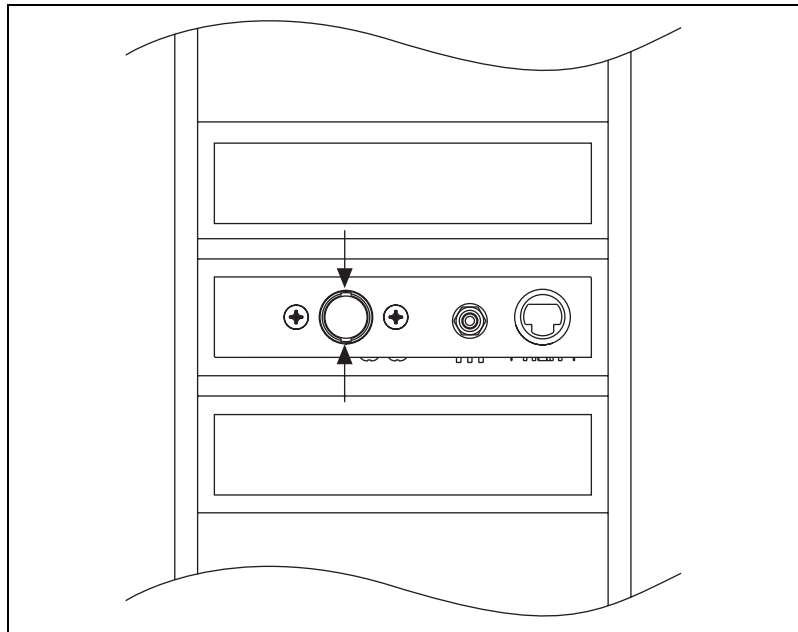
**Figure 4.** USB Installation

◆ ISA for the NI 5102



**Figure 5.** ISA Installation

- ◆ NI 5911 for PCI—When installing the device, make sure that the BNC connector is centered between the metal frame of the chassis. Signal degradation may occur if the outer shell of the BNC cable touches the computer chassis.



**Figure 6.** Centered BNC Connector on the NI 5911 for PCI

# Configuring and Testing the Oscilloscope/Digitizer

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To configure and test your device, complete the following steps:

1. Double-click the **Measurement & Automation** icon on the desktop.
2. Double-click the **Devices and Interfaces** icon to open a list of recognized devices.
3. Find the device in the list which corresponds to your device. Notice the device number your device has been assigned. You will need to use this device number when you program your device.
4. Right-click the device, and select **Properties** from the menu.
5. From the **Properties** window, click **Test Resources** to test the device resources. A dialog box appears and indicates if the resource test has passed.
6. Click **Run Test Panels** to run the functional test panels and begin using your device. Connect a signal to your device, and select appropriate parameters such as the range, input limits, sample rate, and sample mode.



**Note** To minimize noise, do not allow the shell of the BNC cable to touch or lie near the metal of a PCI chassis.

7. Select the **Advanced** button to enable triggering options.
8. Click **Close** when you finish testing your device.
9. Click **OK** from the **Properties** window.

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

## Acquiring Data Programmatically or Interactively

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You can control your device interactively with the VirtualBench-Scope soft front panel software or programmatically with an ADE using the supplied NI-SCOPE Interchangeable Virtual Instrument (IVI) driver.

Pick one of the following options to begin using your device:

- Interactive users—Launch the soft front panel. Open the **VirtualBench-Scope** soft front panel from the **Start»Programs»National Instruments SCOPE** menu. Refer to your device user manual for more information on using this soft front panel to control your device.

- Programmatic users—Begin programming your device in your ADE. You can find LabVIEW examples by going to Program Files\National Instruments\LabVIEW\Examples\Instr\niScope Examples.llb. Examples for CVI, C, or Visual Basic programmers using Windows 98/95 are located in vxipnp\win95\Niscope\Examples, and examples for CVI, C, or Visual Basic programmers using Windows 2000/NT are available at vxipnp\winnt\Niscope\Examples.



**Note** These paths take you to the default locations for programming examples. They will be different if you installed the examples in a different location.



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