

WHERE TO START WITH YOUR NI 5401 PXI™/PCI-BASED ARBITRARY FUNCTION GENERATOR

This document explains how to set up, test, and begin using your NI 5401.

You can control the NI 5401 interactively with the Sources Soft Front Panel, or you can control it programmatically with an Application Development Environment (ADE) using the supplied NI-FGEN Interchangeable Virtual Instrument (IVI) driver. The supported ADEs include LabVIEW, LabWindows/CVI, Visual Basic, and any other C or C++ environment.

Install Your Software

Use the following procedure to set up the software for your NI 5401:

1. If you are using an ADE or third-party tool, make sure that it is installed.
2. Insert your NI Signal Sources Driver Software CD.
3. Click the **Install** option in the installation window that appears.
4. To install the instrument driver, ADE examples, and soft front panel, choose the **Programmatic and Interactive Support** option. To install only the soft front panel, choose the **Interactive Support Only** option.

The software installation is complete.

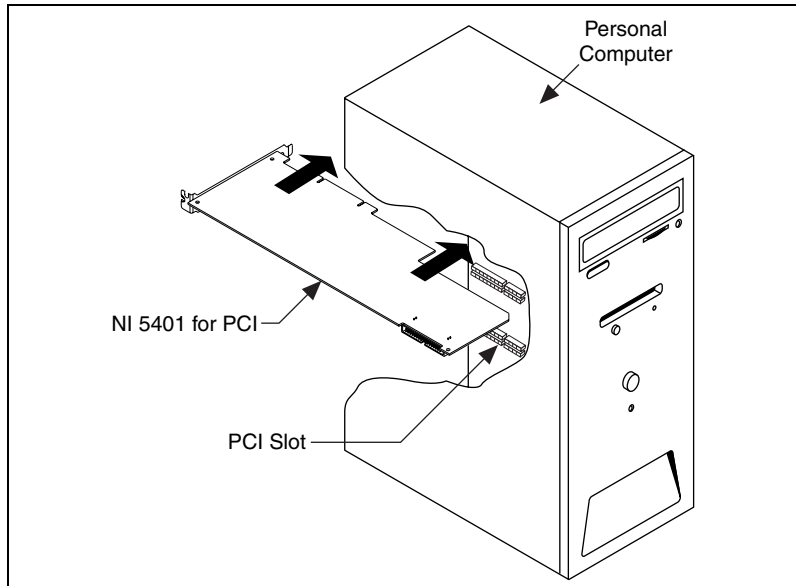
Install Your Hardware

Install your NI 5401 hardware as shown in the following illustrations.

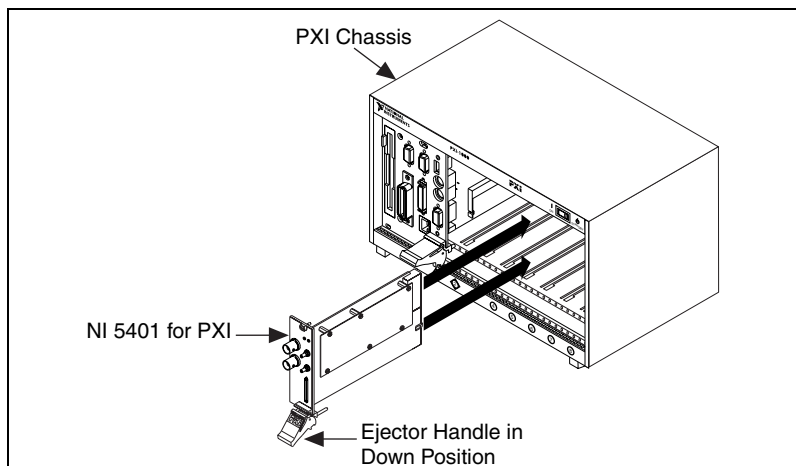


Caution You *must* turn off your PC or chassis before installing your NI 5401. To prevent damage due to electrostatic discharge or contamination, handle the board using the edges or the metal bracket.

◆ NI 5401 (PCI)



◆ NI 5401 (PXI)



Configure and Test Your NI 5401

To configure and test your NI 5401, double-click the **Measurement & Automation** icon on your computer desktop and follow these steps:

1. Double-click the **Devices** icon to open a list of recognized devices.
2. Find the device in the list that corresponds to your NI 5401. Note the number assigned to your device. You will need to use this number when you program your device.
3. Right-click the device and select **Properties** from the pop-up menu.
4. From the Properties window, click **Test Resources**. A dialog box appears and indicates if the device has passed.
 - If the device passes, click **OK**.
 - If the device does not pass, verify that the device is plugged in properly. If the device still fails, contact NI for support.
5. Click **Run Test Panels** and begin using your NI 5401. The Test Panel dialog box appears.
6. Select the appropriate output waveform type, frequency, and amplitude level.
7. Connect an oscilloscope (or other comparable instrument) to your NI 5401 to verify the output of the NI 5401.
8. Click **Close** when you finish testing your NI 5401.
9. Click **OK** from the Properties window.

You have successfully installed and configured the necessary software and hardware to use your NI 5401 with the NI-FGEN software.

Program Your NI 5401

To program your NI 5401, open the Sources Soft Front Panel from the **Start»Programs»National Instruments»NI-FGEN** menu. Refer to your *NI 5401 User Manual* for more information on using this soft front panel to control your NI 5401 function generator.

Begin programming your NI 5401 in your application development environment. Refer to the *NI-FGEN Instrument Driver Quick Reference Guide* and then the *NI-FGEN Online Function Reference Help* in the **Start»Programs»National Instruments»NI-FGEN»Documents** menu for more information on programming your NI 5401 with the instrument driver.