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 VirtualBench-FG soft front panel software, 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 National Instruments arb software CD into your CD-ROM drive. Click on the **Install** option in the installation window that appears.

3. To install the instrument driver, ADE examples, and VirtualBench-ARB soft front panel, choose the **Programmatic and Interactive Support** option. To install only the VirtualBench-FG soft front panels, choose the **Interactive Support Only** option.
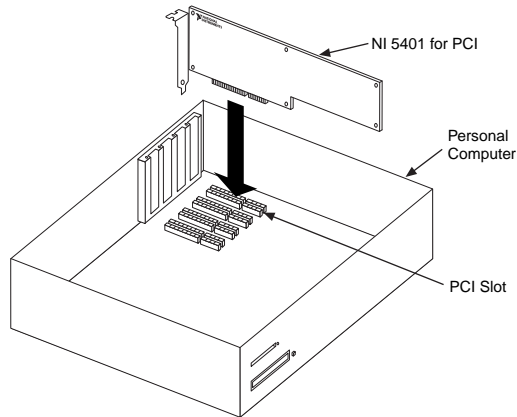
The software installation is complete.

Install Your Hardware

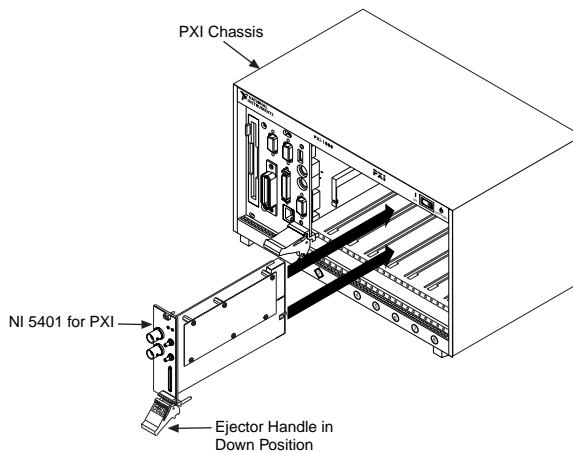Install your NI 5401 hardware as shown in the following illustrations.

⚠️ **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 Your NI 5401

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

1. Double-click on 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 device number to which your device has been assigned. You will need to use this device number when you program your device.

3. Right-click on the device and select **Properties** from the pop-up menu.

4. From the Properties window, click on the **Test Resources** button to test the NI 5401 resources. A dialog box appears and indicates if the resource test has passed. If the test does not pass, verify that the board is plugged in properly. If the test still fails, contact National Instruments for support.

5. Click on **Run Test Panels** to run the functional test panels and begin using your NI 5401. Connect a signal to your NI 5401 and select the appropriate output waveform type, frequency, and amplitude level.

6. Click on **Close** when you finish testing your NI 5401. Click on **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 VirtualBench-FG soft front panel from the **Start»Programs»National Instruments 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 National Instruments FGEN Help file in the **Start»Programs»National Instruments ARB»Documents** menu for more information on programming your NI 5401 with the instrument driver.