# LabWindows™/CVI™ Release Notes

## Version 7.0

These release notes introduce LabWindows/CVI version 7.0. Refer to this document for system requirements, installation and activation instructions, and information about new features in LabWindows/CVI 7.0.

## Contents

**NATIONAL INSTRUMENTS™**

# Minimum System Requirements

To run LabWindows/CVI, you must have the following items:

- Personal computer using a Pentium 600 or higher microprocessor

- Windows 2000/NT SP6/XP/Me/98

- $800 \times 600$ resolution (or higher) video adapter

- Minimum of 128 MB of RAM, 256 MB recommended

- 150 MB free hard disk space for full installation

- Microsoft-compatible mouse

- Microsoft Internet Explorer 5.0 or later, typical installation

**Note** Support for Windows NT/Me/98 will be discontinued in 2004.

# Installation Instructions

1. Insert the CD into the CD drive. If the CD does not run automatically, open Windows Explorer, right-click the CD drive icon, and select **AutoPlay**.

2. On installation startup, the National Instruments LabWindows/CVI 7.0 screen appears. Click **Install LabWindows/CVI**.

3. Continue to follow the instructions on the screen.

# Activation Instructions

After installation, activate LabWindows/CVI by launching the NI License Wizard. Use either of the following methods to launch the wizard.

- Launch LabWindows/CVI after installing the product and click the **Activate License** button from the LabWindows/CVI—Unlicensed Version screen.

- Launch the NI License Manager from **Start»Programs» National Instruments»NI License Manager**. Right-click the LabWindows/CVI product you want to activate in the left pane of the NI License Manager and select **Activate License**.

The NI License Wizard will step you through the activation process. You can select one of the following methods to acquire an activation code.

- **Auto**—The NI License Wizard transmits your information to NI. Your activation code will be generated and installed automatically on your machine.

- **Web**—You can enter your information at `ni.com/license` to generate an activation code that you can enter into the NI License Wizard. If your computer is not connected to the Internet, you can enter your information from another computer with a Web connection to use this method.

- **Email**—The NI License Wizard automatically creates an email with the required activation information and sends the email to `license@ni.com`. You must have a default mail client configured through your browser to use this option. You will receive an activation code that you can enter into the NI License Wizard.

- **Phone/Fax**—You can call or fax a National Instruments customer service representative to receive an activation code that you can enter into the NI License Wizard. The hours during which you can use this method are limited to regular business hours at the National Instruments office or your local branch.

Refer to the *License Activation Instructions for National Instruments Software Note to Users* document included in the LabWindows/CVI software kit for more information about activating LabWindows/CVI.

# New Features

This section includes information about changes and enhancements in LabWindows/CVI 7.0.

## Workspace Window

The Project window has been replaced by a Workspace window containing four areas: a Project Tree, a Library Tree, a Window Confinement Region, and an Output Window Region. The Project Tree contains a list of files for each project in a workspace. From the Project Tree, you can access files in projects and modify projects. The Library Tree contains a tree view of the functions in LabWindows/CVI libraries and loaded instruments. Use the Library Tree to access function panels and help for classes and functions. The Window Confinement Region contains Source windows, User Interface Editor windows, and Function Tree Editor windows. The Output Window Region provides lists of errors, debug output, and search results. For more information, refer to **Workspace Window** in the *LabWindows/CVI Help* index.

## NI-DAQmx Library

LabWindows/CVI 7.0 includes support for the NI-DAQmx Library, which contains functions for communicating with and controlling DAQ devices. After you install NI-DAQmx, refer to **Library Reference»NI-DAQmx Library** in the *LabWindows/CVI Help* for more information about using NI-DAQmx Library functions.

## DAQ Assistant

Launch the DAQ Assistant from LabWindows/CVI by selecting **Tools» Create/Edit DAQmx Tasks**. The DAQ Assistant helps you configure tasks, channels, and scales using a graphical interface. You can use the DAQ Assistant to generate code from a task or channel for use in your application. For more information, refer to **DAQ Assistant** in the *LabWindows/CVI Help* index.

## Instrument I/O Assistant

LabWindows/CVI 7.0 includes the Instrument I/O Assistant, a tool you can use to configure instrument control tasks. You can send instrument commands, view the instrument output, and interactively parse the output with the Instrument I/O Assistant. The Instrument I/O Assistant generates source code for the instrument control task that you can run from your LabWindows/CVI program. For more information, refer to **Instrument I/O Assistant** in the *LabWindows/CVI Help* index.

## Tree Control in the User Interface Library

Add tree controls to graphical user interfaces you create. Select **Create»Lists & Tables** to access the tree control. You also can create a tree control programmatically. For more information, refer to **Tree Control Overview** in the *LabWindows/CVI Help* index.

## Graph Control Enhancements

LabWindows/CVI 7.0 includes a set of new features that you can use in graph controls. This set of new features includes a built-in plot legend, a second x-axis, anti-aliased plots, and additional grid line divisions. You can access these new features programmatically or through the Edit Graph dialog box. For more information, refer to **Programming with Graph Controls** in the *LabWindows/CVI Help* index.

## Conversion from Function Panels to XML Documents

You can convert function panel files to XML documents by selecting **Options»Save in XML Format** in the Function Tree Editor or

Function Panel Editor. For more information, refer to **.fpx Files** in the *LabWindows/CVI Help* index.

## Data Binding in Controls

You can bind a control to a DataSocket source from within the LabWindows/CVI environment. For more information, refer to **DSBindCtrl** in the *LabWindows/CVI Help* index.

## HTML Display for Function Panel Help

The function panel help in LabWindows/CVI 7.0 is HTML-based for an improved display.

## Function Panel Customization

You can associate a control in a function panel to a callback function in a DLL to provide customized input selections for controls in function panels that you create. For more information, refer to **Function Panel Customization** in the *LabWindows/CVI Help* index.

## Reassignable Shortcut Keys

You can reassign shortcut keys to match your preference by selecting **Options»Change Shortcut Keys**. For more information, refer to **Changing Shortcut Keys** in the *LabWindows/CVI Help* index.

## Name Completion in Source Windows

LabWindows/CVI 7.0 includes the **Show Completions** option, which you can use to view a list of potential matches for the function, variable, or macro you are typing. For more information, refer to **Show Completions** in the *LabWindows/CVI Help* index.

## Function Prototype Display

The Editor Preferences dialog box contains the **Show function prototypes and struct/union fields while typing** option. If you enable this option, LabWindows/CVI shows the prototype of the function when you type the open parenthesis after a function. For more information, refer to **Displaying Function Prototype** in the *LabWindows/CVI Help* index.

## Function Tree Generation from a Header File

LabWindows/CVI includes the **Generate Function Tree** option, which you can use to generate a function tree from a header file. For more information, refer to **Generate Function Tree** in the *LabWindows/CVI Help* index.

## Enhanced Multiple File Searching

The **Find** command has been modified to enhance multiple file searching. When you enable the **Multiple Files** option, you can specify the file extension(s) of the file types you want to search. You also can specify an entire directory to search and choose to list the search results in the Output Window Region. For more information, refer to **Finding Text in Source Windows** in the *LabWindows/CVI Help* index.

## Changing the Point of Execution

LabWindows/CVI 7.0 includes the **Set Next Statement** command, which you can use to change the next statement to execute while you are debugging. This command is useful if you want to skip over code you know is going to fail or if you executed code that failed and you want to go back and investigate that code. For more information, refer to **Set Next Statement** in the *LabWindows/CVI Help* index.

## TCP/IP Support in LabVIEW Real-Time

TCP/IP is supported in the LabVIEW Real-Time platform in LabWindows/CVI 7.0. For more information, refer to **Target Settings for DLLs** in the *LabWindows/CVI Help* index.

## Editable Data Tooltips

You now can edit the value of a variable in tooltips. If the value in the tooltip is bold, you can change the value. For more information, refer to **Tooltips** in the *LabWindows/CVI Help* index.

## Enhancements to the ActiveX Server Wizard

The LabWindows/CVI 7.0 Create ActiveX Server Wizard includes the **Import from Function Tree (.fp file)** option, which you can use to create server interfaces and objects based on a function panel file. In LabWindows/CVI 7.0, you also can incorporate events into your ActiveX servers using this wizard. For more information, refer to the *Building ActiveX Servers in LabWindows/CVI* application note in the `bin` folder of the LabWindows/CVI installation.

## 64-Bit Integer Support

LabWindows/CVI 7.0 supports 64-bit integers. You can use the `__int64` and `unsigned __int64` data types in LabWindows/CVI 7.0.

## Quick Searching

LabWindows/CVI 7.0 includes the **Quick Search** command, which you can use to perform an incremental search in a source file. When you select this command and begin typing, **Quick Search** finds matches of the letters you typed. For more information, refer to **Quick Search** in the *LabWindows/CVI Help* index.

## Custom Control Enhancements

You now can add initialization and callback configuration code to the custom controls you create in the User Interface Editor. LabWindows/CVI 7.0 also includes a full set of built-in Toolslib custom controls. Select **Create»Custom Controls»Toolslib Controls** to access these controls in the User Interface Editor. For more information, refer to **Custom Controls** in the *LabWindows/CVI Help* index.

## Embedded User Interface Resource Files

LabWindows/CVI 7.0 allows you to embed user interface resource (`.uir`) files in an executable or DLL, thus eliminating the need to deploy them with the application. For more information, refer to **Target Settings** in the *LabWindows/CVI Help* index.

## New Toolslib Items

The Tools Library includes the following new items: the XML API, which contains functions you can use to create and modify XML documents; the hot ring control instrument driver, which contains functions you can use to create and modify ring controls that have the quick-typing feature enabled; the path control, which you can use to select file and directory paths; the Measurement Studio 3D Graph, a full-featured ActiveX control; the radio button group control, which you can use to represent mutually exclusive choices; the file browser, which is a tree-based method of browsing and selecting files in your computer; and NI-DAQmx IO controls, which you can use to enumerate tasks, channels, scales, and different devices in your PC. For more information about these items, refer to the function panel help for each instrument.

# LabWindows/CVI Resources

**How do I get started?**

Read the *Getting Started with LabWindows/CVI* manual, which provides a tutorial of the LabWindows/CVI environment.

**Are there known issues or late-breaking information?**

LabWindows/CVI installs a Readme, which you can access from **Start»Programs»National Instruments»LabWindows CVI 7.0» LabWindows CVI Readme**. The Readme contains information about known issues.

**Where can I find reference information?**

The *LabWindows/CVI Help* contains complete reference information. The help file includes the following sections:

* *Using LabWindows/CVI* describes the LabWindows/CVI development environment and features.

* *Library Reference* provides information about functions you can call in LabWindows/CVI.

* *Programmer Reference* provides information to help you develop applications.

* *Example Programs* contains LabWindows/CVI sample programs you can launch and run from the help topic.

* *Tools Library* provides information about the LabWindows/CVI Toolslib controls.

**Where can I find examples?**

Find examples with the NI Example Finder, which you can access by selecting **Help»NI Example Finder**.

**Is there a list of LabWindows/CVI documentation?**

The *LabWindows/CVI Bookshelf* contains all the LabWindows/CVI documentation, including manuals, application notes, and white papers, in electronic format. You need Adobe Acrobat + Search to search the Bookshelf. You can launch the Bookshelf from **Start»Programs»National Instruments»LabWindows CVI 7.0»LabWindows CVI Bookshelf**.

**Where else can I go for LabWindows/CVI information?**

Visit the LabWindows/CVI Web site and NI Developer Zone at ni.com for the most up-to-date information about LabWindows/CVI.