

LabWindows™ /CVI™ Release Notes

Version 8.0.1

These release notes introduce LabWindows™/CVI™ 8.0.1. Refer to this document for system requirements, installation and activation instructions, and information about new features in LabWindows/CVI.

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Minimum System Requirements

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

- Personal computer using a Pentium 600 or higher microprocessor
- Windows 2000/XP
- 800 × 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

Installation Instructions

Complete the following steps to install LabWindows/CVI 8.0.1:



Note If you have LabWindows/CVI 7.x or earlier installed on your computer, be sure to install version 8.0.1 in a different directory or uninstall the earlier version before installing version 8.0.1. If you have LabWindows/CVI 8.0 installed on your computer, you can install version 8.0.1 in the same directory. In this case, LabWindows/CVI 8.0.1 overwrites LabWindows/CVI 8.0.

1. Insert the LabWindows/CVI 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. Select **Install LabWindows/CVI** on the National Instruments LabWindows/CVI screen.
3. LabWindows/CVI prompts you to enter your user information. Select one of the following options:
 - **Install this product using the following serial number**
 - **Install this product for evaluation**

If you choose to enter a serial number, enter the serial number found on your Certificate of Ownership card. LabWindows/CVI automatically uses this serial number when you run the NI Activation Wizard.

4. Continue to follow the instructions on the screen.

Activation Instructions

Complete the following steps to activate LabWindows/CVI 8.0.1:

1. When you launch LabWindows/CVI for the first time after installation, LabWindows/CVI displays the Evaluation License dialog box. Click **Activate** to launch the NI Activation Wizard.

2. In the NI Activation Wizard, select one of the following methods to acquire the activation code and click **Next**.
 - **Automatically activate through a secure Internet connection**—Automatically receive an activation code.
 - **Use a Web browser, email client, telephone, or fax machine to acquire an activation code**—Contact National Instruments to obtain an activation code. You will then enter the code in the NI Activation Wizard to activate LabWindows/CVI.
 - **Apply a 20-character activation code previously acquired for this computer**—Enter a code you have obtained to activate LabWindows/CVI.



Note The remaining instructions assume you select the **Automatically activate through a secure Internet connection** option. If you select an alternate option, follow the instructions on the screen to complete product activation.

3. Enter or verify your serial number. Click **Next**.
4. Continue to follow the instructions on the screen.
5. When you successfully activate LabWindows/CVI, click **Finish**.

What's New in LabWindows/CVI?

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

Download LabWindows/CVI DLLs to Real-Time Targets

You can use LabWindows/CVI to create a DLL that you can download to an RT target directly from LabWindows/CVI. After LabWindows/CVI downloads the DLL, you can debug the DLL on the RT target or deploy the DLL to a production RT target. You must have the LabWindows/CVI 8.0 Real-Time Module installed on your computer to use this feature.

For more information about downloading DLLs, refer to the *Programmer Reference» Creating and Downloading DLLs to Real-Time Targets* section of the *LabWindows/CVI Help*.

Create Visual Studio 2005 Projects That Use LabWindows/CVI Libraries

Use the LabWindows/CVI Application Wizard to create a new Visual C++ project that uses LabWindows/CVI libraries. You also can use the LabWindows/CVI Conversion Wizard to convert an existing LabWindows/CVI project to a Visual C++ project. To use these wizards, you must have installed Microsoft Visual Studio 2005 or later (Standard edition or higher).

For more information about creating Visual Studio 2005 projects that use LabWindows/CVI libraries, refer to the *Using LabWindows/CVI»Wizards and Tools»Creating Visual Studio 2005 Projects* section of the *LabWindows/CVI Help*.

Call .NET Assemblies

Use the .NET Library to call .NET assemblies. LabWindows/CVI also provides the Create LabWindows/CVI .NET Controller dialog box, which you can use to generate an instrument driver that serves as a wrapper for a .NET assembly.

For more information about using .NET assemblies in LabWindows/CVI, including sample code, refer to the *Library Reference»NET Library* section of the *LabWindows/CVI Help*.

Create Optimized Code

You can use an external optimizing compiler to compile LabWindows/CVI code from within the LabWindows/CVI environment. To compile your code using an external optimizing compiler, you must create a compiler configuration for that compiler. LabWindows/CVI provides configuration templates for Microsoft Visual C++, Borland, and Intel compilers.

For more information about creating optimized code, refer to the *Programmer Reference»Creating Optimized Code* section of the *LabWindows/CVI Help*.

Add Tabs to Graphical User Interfaces

Use the tab control to organize user interface panels into multiple tabbed pages. As with all other LabWindows/CVI controls, you can create and modify tab controls programmatically or in the User Interface Editor.

For more information about the tab control, refer to the *Library Reference»User Interface Library»Controls»Control Types»Tab Control* section of the *LabWindows/CVI Help*.

Use Updated Graph Control Features

You can use the graph control features for the following tasks:

- Add annotations to specified data points
- Use absolute and relative time formats for graph axes
- Change plot settings interactively with the graph legend
- Convert pixels to graph units
- Use multi-line text in custom axis label text strings

For more information about the graph control features, refer to the *Library Reference»User Interface Library»Controls»Control Types»Graph Control* section of the *LabWindows/CVI Help*.

Distribute LabWindows/CVI Applications

LabWindows/CVI provides a redesigned way to distribute applications. You now can create a distribution that includes not only the LabWindows/CVI application but also its dependencies. Use the new distribution creation feature to include NI product drivers and custom merge modules in installers.

For more information about the new distribution system, refer to the *Using LabWindows/CVI»Managing Projects»Building a Project»Distributing Applications* section of the *LabWindows/CVI Help*.

View the Source Code Browser in the Workspace Window

You can view and interact with the Source Code Browser from within the Workspace window. LabWindows/CVI displays the Source Code Browser at the bottom of the Workspace window.

Include New Cell Types in the Table Control

The table control now supports ring, combo box, and button cells. The table control continues to support numeric, picture, and string cells, as it has in previous versions.

For more information about the table control, refer to the *Library Reference»User Interface Library»Controls»Control Types»Table Control* section of the *LabWindows/CVI Help*.

Use New Advanced Analysis Library Functions

The Advanced Analysis Library has been improved to include new curve fitting and windowing functions, high-performance linear algebra functions, and enhancements to two-dimensional Fast Fourier Transform (FFT) analysis and other signal processing features.



Note The Advanced Analysis Library is available in the LabWindows/CVI Full Development System only.

For more information about the updated Advanced Analysis Library, refer to the *Library Reference»Advanced Analysis Library* section of the *LabWindows/CVI Help*.

Customize Menu Bars

You can customize menu bars by adding images to menu items and specifying a font for menu bars. For more information about customizing menu bars, refer to the *Using LabWindows/CVI»Developing a Graphical User Interface»Creating a GUI»Menu Bars»Creating a Menu Bar* topic in the *LabWindows/CVI Help*.

Enhance Toolbars

You can add pull-down menus, string controls, and color numeric controls to the toolbar. You also can include multiple toolbars on a single panel. The updated toolbar instrument driver provides a move handle, which you can place on a toolbar to allow a user to dock and undock the toolbar and to move the toolbar from one panel to another.

For more information about the toolbar, refer to the *Tools Library»Toolbar Control* section of the *LabWindows/CVI Help*.

Record Macros

You can record macros in the Source window to save and repeat a series of actions, such as keystrokes and menu selections. For more information about macros, refer to the *Using LabWindows/CVI»Writing Source Code»Recording Macros* topic in the *LabWindows/CVI Help*.

Auto-Indent Source Files

LabWindows/CVI automatically indents source code based on the bracket style preferences you specify. The auto-indent feature is turned on by default. You can set auto-indent options in the Editor Preferences dialog box.

Enable Documentation Tooltips for User-Defined Functions

You can add special tags to functions you define to make documentation for these functions available throughout your project. For more information about adding the documentation tags, refer to the *Using LabWindows/CVI»Writing Source Code»Editing a Source File»Documenting Source Code* topic in the *LabWindows/CVI Help*.

Include Alpha-Channel Data in Image Files

You can set alpha-channel data in bitmaps you use in LabWindows/CVI to create partially transparent images. To set alpha-channel data, you must use the .png file format. LabWindows/CVI includes the following functions specifically for .png support:

- NewBitmapEx
- SetBitmapDataEx
- GetBitmapDataEx
- GetBitmapInfoEx
- AllocBitmapDataEx
- SaveBitmapToPNGFile

For more information about alpha-channel data and .png files, refer to the *Library Reference»User Interface Library»Overview»Common User Interface Objects»Using Bitmap Objects* topic in the *LabWindows/CVI Help*.

Experience Improved DIAdem Connectivity Library Performance

The updated DIAdem Connectivity Library now features improved performance for appending data to an existing file. For more information about the DIAdem Connectivity Library, refer to the *Library Reference»DIAdem Connectivity Library* section of the *LabWindows/CVI Help*.

Use the Enhanced Instrument I/O Assistant

The Instrument I/O Assistant now features improved code generation capabilities. You also can configure instrument inputs at run time using the assistant. For more information about the Instrument I/O Assistant, refer to the *Using LabWindows/CVI»Wizards and Tools»Creating an Instrument I/O Task* section of the *LabWindows/CVI Help*.

Create IVI Class Drivers with the IVI Custom Class Driver Wizard

Use the new IVI Custom Class Driver Wizard to help you create IVI class drivers for instrument classes not defined by the IVI Foundation. With custom class drivers, you can replace one instrument belonging to that class with another instrument without modifying your test applications. This new wizard automatically generates source (.c), include (.h), and function panel (.fp) files for your custom IVI class driver.

For more information about the wizard, refer to the *Using LabWindows/CVI»Wizards and Tools»Creating an IVI Custom Class Driver* section of the *LabWindows/CVI Help*.

LabWindows/CVI Resources

How do I get started?

Read the *Getting Started with LabWindows/CVI* manual, which provides a tutorial for learning basic LabWindows/CVI program development techniques.

Are there known issues or late-breaking information?

Refer to the *LabWindows/CVI Readme*, which you can access from **Start»Programs»National Instruments»LabWindows CVI 8.0.1»LabWindows CVI Readme**. The readme file 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.
- *Tools Library* provides information about the LabWindows/CVI Toolslib controls.

Use the **Search** tab in the *LabWindows/CVI Help* to quickly locate specific information. For information about how to use the search functionality, refer to the *Using Help»Searching Help* topic in the *LabWindows/CVI Help*.

Where can I find examples?

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

Is there a list of LabWindows/CVI documentation?

The *Guide to LabWindows/CVI Documentation* topic provides links to LabWindows/CVI documentation, including manuals, application notes, and white papers. You can access the *Guide to LabWindows/CVI Documentation* topic through the *LabWindows/CVI Help*.

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.

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