

VALUEMOTION™ 5.0

ValueMotion 5.0 is the motion control software and VIs for interfacing with all National Instruments ValueMotion series motion controllers. The ValueMotion software is compatible with Windows 2000/NT/Me/9x.

These release notes discuss compatibility issues, describe how to install your ValueMotion software and hardware, and summarize changes and improvements associated with this version. Topics include:

- *Compatibility Issues*
- *Summary of Changes*
- *Software Installation*
- *Hardware Installation*
- *Using the Online Manuals*

Compatibility Issues

Software

ValueMotion Software 5.0 is backward compatible with ValueMotion Software 4.3. Existing programs will continue to work.

VIs

Your existing VIs, developed with the ValueMotion VI Library 4.3, will continue to work with the ValueMotion VI Library 5.0.

The ValueMotion VI Library works with versions 5.1 and later. If you have an older version of LabVIEW, contact National Instruments for an upgrade.

Summary of Changes

ValueMotion 5.0 is an update to the version 4.3 software. An Initialization VI/function has been added in this release that simplifies the initialization process.

Motion control is now integrated into Measurement & Automation Explorer (MAX), the National Instruments global configuration utility. You can set static motion parameters in the configuration panels, which reduces your programming tasks to a simple Initialization call and motion control application development. MAX for motion also includes an interactive environment that allows you to interactively test your motion configuration and view single or multi-axis movement in plot graphs.

The online documentation has been updated, and a few bugs have been fixed.

MAX Home & Index

The **Home & Index Settings** in MAX are not used by the Find Home or Find Index functions. This panel is included in MAX for future use. If you wish to do a Find Home or Find Index operation, National Instruments recommends you do so after initializing your controller.

LabVIEW 6i and Range Coercion

LabVIEW 6i has changed the way the suspend and coerce functionality of a front panel control works. Suspend is no longer supported. Coerce is supported when data is input to the control via the front panel, but not when a value is passed to the control via a wire connection to its terminal. These features were used by ValueMotion VIs, so their behavior will be different when used with LabVIEW 6i. Specifically, values that were previously coerced, such as a value that was too high, will now be passed to the ValueMotion board. Likewise, incorrect values, such as a slot number of 0, now produce an error rather than show up in LabVIEW as the special suspend warning.

Software Installation

You must install the ValueMotion software before installing a ValueMotion series motion controller for the first time. If you are upgrading from a previous version of the ValueMotion software, you do not need to remove your ValueMotion controller before installing the upgrade. Your existing configuration settings are not affected by the upgrade.

Complete the following steps to install your FlexMotion software:

1. Insert the NI-Motion 5.0 CD into your CD-ROM drive. The CD automatically shows the NI-Motion installation screen.
2. Click **ValueMotion 5.0 Installation** and then choose the **Install** option.
3. Follow the installer prompts through the rest of the installation.
4. Refer to the `ReadMe.txt` file after the installation is complete for last-minute information not contained in this document or the ValueMotion online help.

The ValueMotion software is installed.

ValueMotion ServoTune

The ValueMotion ServoTune application for tuning servo motors is provided free of charge. You can find it on your ValueMotion Software CD in the `\Other\ServoTune\ValueMotion` directory. To install the ServoTune application, run `setup.exe` from the `Disk1` subfolder.

If you are also installing the ValueMotion VI Library 5.0, you do not need to install ServoTune. The tuning VIs are included on the ValueMotion LabVIEW functions palette.

You must manually enter the PID parameters that you established in ServoTune into the PID configuration panel in MAX. To access the PID configuration panel,

1. Launch MAX.
2. Expand the Devices and Interfaces category in the configuration tree.
3. Expand the device and default initialization settings items.
4. Select **Axis Settings** from the configuration tree and select **Control Loop** from beneath the configuration view.
5. Use the sliders and numerical edit boxes to enter your PID parameters.

The serial number for the ServoTune application, which you need during installation, is `v43m43434`.

Software Updates

You can find ValueMotion 5.0 updates and patches by visiting ni.com/motion and clicking on **Drivers & Downloads**.

Hardware Installation

If this is the first time you have installed the ValueMotion software on your computer, complete the following steps to install your ValueMotion series motion controller.



Note Refer to Chapter 2, *Configuration and Installation*, of your motion controller hardware user manual if you need additional hardware installation and handling instructions.

PCI/PXI Installation

Complete the following steps to install your PCI/PXI motion controller:

1. Shut down and unplug your computer.
2. Install the controller in an available slot in your computer.
3. Restart your computer.
4. Click on the **Start** button on your Windows 2000/NT/Me/9x taskbar and select **Programs»National Instruments»Measurement & Automation** to launch Measurement & Automation Explorer. Expand the **Devices and Interfaces** category in the configuration tree and select your installed ValueMotion controller. Measurement & Automation Explorer automatically assigns the first available Board ID to your controller.
5. Select **Help»Help Topics»NI-Motion** to view the online help for Measurement & Automation Explorer. The online help contains complete information on verifying your configuration and testing the installed ValueMotion controller.

Your PCI/PXI motion controller is successfully installed.

ISA Installation

For ISA installation instructions, refer to the online help topic *Adding Your Motion Controller* in Measurement & Automation Explorer. To access Measurement & Automation Explorer online help for Motion, click the **Start** button on your Windows task bar and select **Programs»National Instruments»Measurement & Automation**. Next, select **Help»Help Topics»NI-Motion»Motion Configuration Help** from the Measurement & Automation Explorer menu.

Using the Online Manuals

The ValueMotion documentation is shipped with your software as Adobe Acrobat portable document format (PDF) files. The software documentation is also installed as a Windows online help file.



Note If you do not already have Acrobat Reader version 4.0 or later installed on your system, you can install it from the ValueMotion Software CD. Run the `rs40eng.exe` file found in the CD's `Other\Adobe Acrobat\Win32` directory. To view the installed PDF documents, click on the **Start** button on the Windows taskbar and select **Programs»National Instruments Motion Control»ValueMotion** and then the document that you wish to view. This automatically launches the Acrobat Reader and opens the selected PDF file. You can assemble your own printed manuals, printing either the entire documentation set or only the sections relevant to your application.

Click on any entry in the table of contents to jump directly to the corresponding manual page. You can jump to major sections within each document quickly and easily by clicking on the bookmarks.

When you choose the **View»Go To Page** option or are printing pages, you must use the page numbers in the lower left corner of the Acrobat window, not the number displayed in the bottom center of each manual page or listed in the contents and index. Acrobat assigns consecutive numbers to each page throughout the document and displays the page number. The numbers may not match those shown at the bottom center of each manual page.

You can use the Acrobat Reader to quickly find and go to every occurrence of any word or phrase in the entire document. Simply select the **Tools»Find** option and type the key word or phrase that you want to find.



322540B-01

Jul00