

VALUEMOTION™ SOFTWARE VERSION 4.3

ValueMotion Software 4.3 is the motion control software for interfacing with all National Instruments ValueMotion series motion controllers. The ValueMotion software is compatible with Windows 2000/NT/98/95.

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

Compatibility Issues

ValueMotion Software 4.3 is backward compatible with ValueMotion Software 2.0. Existing programs will continue to work.

Upgrading ValueMotion Software under Windows 98 or Windows 2000

If you were using ValueMotion Software 2.0 under Windows 98 or Windows 2000, refer to the following sections for operating system-specific information.

Windows 98

The National Instruments motion control driver has been changed to use the new Windows Driver Model (WDM) for improved Power Management and Plug and Play support. If you have plug and play motion controllers, they will be automatically re-installed to use this new WDM driver. If you have non-plug and play (ISA bus) boards, you will have to re-install them using the Windows 98 Add New Hardware Wizard. Be sure to reboot your computer after installing the software and before adding any motion controllers.

Windows 2000

After installing the ValueMotion software, described in the *Software Installation* section of this document, remove all plug and play motion controllers using the Windows 2000 Device Manager. As earlier versions

of the motion control drivers did not have plug and play capability under Windows 2000, motion controllers appear in the Device Manager under **Other Devices** as **PCI Device**. Right-click on **PCI Device** and select **Uninstall**. When you restart your computer, Windows 2000 will automatically re-install the motion controllers correctly.

If you have non-plug and play (ISA bus) boards, refer to the *ISA Installation* section of this document. You will have to re-install the ISA controllers using the Windows 2000 Add/Remove Hardware Wizard.

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 software:

1. If you have an earlier version of the ValueMotion software installed on your computer, remove it using the Add/Remove Programs feature in Windows. All of your configuration information for previously installed ValueMotion and FlexMotion controllers is preserved.
2. Insert the ValueMotion Software 4.3 CD into your CD-ROM drive.
3. Select **Install ValueMotion Software 4.3**.
4. Follow the installer prompts through the rest of the installation.
5. Refer to the `ReadMe.txt` file after the installation is complete for last-minute information.

The ValueMotion software is installed.

ValueMotion ServoTune

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

If you are also installing the ValueMotion VI Library 4.3, you do not need to install ServoTune. The tuning VIs are included on the ValueMotion LabVIEW functions palette.

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

Hardware Installation

If this is the first time that you have installed the ValueMotion software on your computer, then 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 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/98/95 taskbar and select **Programs»National Instruments Motion Control»Explore Motion Control** to launch Measurement & Automation Explorer. Click on the **Devices and Interfaces** icon and select your installed ValueMotion controller. Measurement & Automation Explorer automatically assigns the first available Board ID to your controller.
5. Press F1 or select **Help»Help Topics** 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

Windows 2000/98/95

Complete the following steps to install your ISA controller:

1. Click on the **Start** button on your Windows 2000/98/95 taskbar and select **Settings»Control Panel**.
2. Double-click on the **Add/Remove Hardware** (Windows 2000) or **Add New Hardware** (Windows 98/95) icon.
3. If you are installing your controller under Windows 98/95, go to step 5. If you are installing your controller under Windows 2000, select **Add/Troubleshoot a Device** and click on the **Next** button.
4. Select **Add a New Device** and click on the **Next** button.

5. Click on the **Next** button and select **No** when prompted to search for new hardware, and then click on the **Next** button.
6. Select the **National Instruments Motion Controllers** hardware type and click on the **Next** button.
7. Select your ValueMotion board type and click on the **Next** button again.
8. After Windows assigns resources to the board, make a note of the Input/Output range. Then click on the **Next** button.
9. Click the **Finish** button to complete the Add New Hardware Wizard.
10. Refer to Chapter 3, *Hardware Overview*, of your *ValueMotion Hardware User Manual* for the proper DIP switch settings for the your controller to match the address assigned by Windows.
11. Shut down your computer.
12. Install your controller in an available ISA slot.
13. Restart your computer.
14. Click on the **Start** button on your Windows 2000/98/95 taskbar and select **Programs»National Instruments Motion Control»Explore Motion Control** to launch Measurement & Automation Explorer.
15. Click on the **Devices and Interfaces** icon and select your installed motion controller. Measurement & Automation Explorer automatically assigns the first available Board ID to your controller.
16. Press F1 or select **Help»Help Topics** 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 motion controller is successfully installed.

Windows NT 4.0

Complete the following steps to install your ValueMotion controller:

1. Restart your computer after installing the ValueMotion software, but do not install your motion controller yet.
2. Click on the **Start** button on your Windows NT taskbar and select **Programs»National Instruments Motion Control»Explore Motion Control** to launch Measurement & Automation Explorer.
3. Right-click on **Devices and Interfaces** in Measurement & Automation Explorer and select **Insert** from the pop-up menu. Select **National Instruments Motion Controllers** from the Insert New dialog box to launch the Add New Motion Control Board Wizard.

4. In the first dialog box of the Add New Motion Control Board Wizard, select your board and a board ID. Click **Next** to view the resources assigned to the board. To change the resource settings, select a resource and click **Change Settings** (these settings can be changed later using the Resources tab of the Properties dialog box).
5. Make a note of the Input/Output range assigned to your controller.
6. Refer to Chapter 3, *Hardware Overview*, of your *ValueMotion Hardware User Manual* for the proper DIP switch settings for the your controller to match the address assigned by Windows.
7. Shut down your computer.
8. Install the motion controller in an available ISA slot.
9. Restart your computer.
10. Click on the **Start** button on your Windows NT taskbar and select **Programs»National Instruments Motion Control»Explore Motion Control** to launch Measurement & Automation Explorer.
11. Click on the **Devices and Interfaces** icon and select your installed ValueMotion controller. Measurement & Automation Explorer automatically assigns the first available Board ID to your controller.
12. Press F1 or select **Help»Help Topics** 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 motion controller is successfully installed.

Windows 3.1 and DOS Support

The previous release of ValueMotion Software (version 2.0) supports Windows 3.1 and DOS with the ISA bus ValueMotion controllers. ValueMotion Software 2.0 is located in the `Other\Value20` directory on the ValueMotion Software 4.3 CD. Installing under Windows 3.1 also installs the DOS support in the `Valmotn\DOS` directory. To install ValueMotion 2.0 directly in DOS without Windows 3.1, run the batch file in the `Other\DOSSetup` directory on the ValueMotion Software 4.3 CD.

Summary of Changes

Version 4.3 of the ValueMotion software is a minor update to the version 2.0 software. Primarily, this update improves the configuration process. Additionally, support for the new PCI-7324 and PCI-7314 ValueMotion controllers has been added, the documentation has been updated, and some minor bugs have been fixed.

Board configuration has been moved from the old Motion Board Configuration Utility to the new National Instruments Measurement & Automation Explorer, which you can access by selecting **Start» Programs»National Instruments Motion Control»Explore Motion Control**.

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 3.0 or later installed on your system, you can install it from the ValueMotion Software CD. Run the `setup.exe` file found in the CD's `Other\Adobe Acrobat` 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.

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