

# **EMGworks<sup>®</sup> Installation Guide**

**April 2009 Edition  
PM-E05**

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**Specifications and procedures outlined in this document are subject to change without notice.**

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## Introduction

Thank you for purchasing EMGworks Data Acquisition and Analysis Software. This document contains important information for installing the software and its associated hardware. Please note that EMGworks is compatible only with Microsoft Windows XP® 32 bit and Microsoft Windows Vista® 32 bit.

### Minimum System Requirements

- Windows XP 32 bit with Service Pack 2 or Windows Vista Home Premium, Business, or Ultimate 32 bit
- 1 GHz processor
- 1 GB system memory
- 1 GB free hard disk space
- 1024x768 (XGA) display resolution
- Any computer carrying the “Windows Vista Premium Ready PC” logo meets these requirements and can run EMGworks
- Alternatively, an Windows Vista System with an “Experience Index of 3.0 or greater

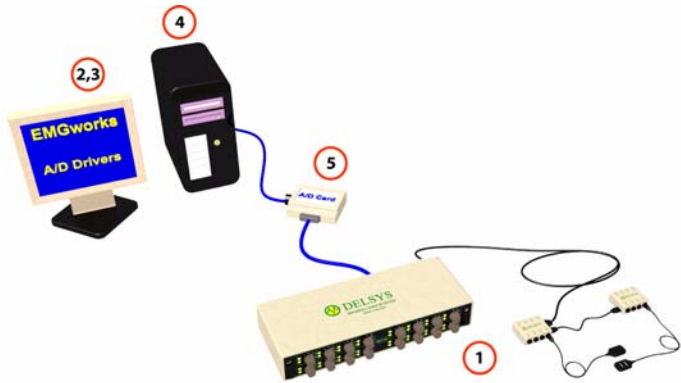
### Recommended Requirements for Optimal Performance

- Multi-core processor, at 1GHz or more.
- 128 MB video memory
- 2 GB system memory
- 1GB free hard disk space.
- Dual Monitor with 1280x1024 (SXGA) display resolution or better
- Alternatively any Windows Vista System with an Experience Index of 4.0 or greater.

# Installation Scenarios

There are four typical installation scenarios. It is necessary to choose the appropriate scenario before proceeding:

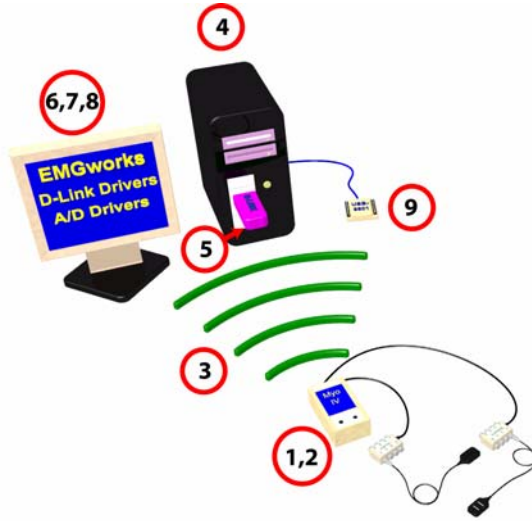
## 1. Installation for a Bagnoli EMG System



1	Bagnoli EMG System	4	PC (desktop or laptop)
2	EMGworks Acquisition & Analysis Software	5	NI A/D Card
3	NI Driver for A/D Card		

In this configuration a Bagnoli EMG System is operated with EMGworks software installed on a PC. This scenario requires the installation of a data acquisition device (A/D card) prior to the installation of EMGworks. See the next section in this manual named “Installing the Data Acquisition Device” for instructions prior to installing the EMGworks software.

## 2. Installation for a Myomonitor EMG System

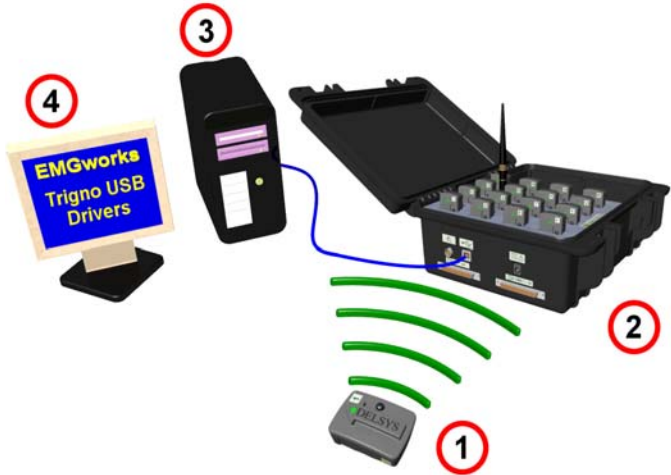


1	Myomonitor EMG System	6	D-Link Software Drivers
2	EMGworks Wireless Software for handheld PC	7	EMGworks Acquisition & Analysis Software
3	Wireless Transmission	8	NI drivers for optional Trigger Module
4	Host Computer	9	Optional Wireless Trigger Module
5	D-Link USB Receiver		



This scenario requires the installation and configuration of a wireless network. Install EMGworks first, then refer to the **Myomonitor IV EMG System Installation Guide** for instructions on setting up the system. Skip the next section in this manual named “Installing the Data Acquisition Device”.

### 3. Installation for Trigno EMG System



1	Trigno Sensor	3	Host Computer with USB connection
2	Trigno Base Station	4	EMGworks Acquisition & Analysis Software



The drivers for the Trigno system are automatically installed with EMGworks. Install EMGworks before connecting your Trigno base. Refer to the **Trigno Wireless EMG System Installation Guide** for additional information. Skip the next section in this manual named “Installing the Data Acquisition Device”.

### 4. Installation for Demonstration Purposes

This scenario allows the user to try EMGworks for a maximum of 30 days without any hardware installed. Skip the next section in this manual named “Installing the Data Acquisition Device”.

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## Installing the Data Acquisition Device

The installation of EMGworks for a Bagnoli EMG System requires the installation of a National Instruments data acquisition device first. If EMGworks is being installed for a Myomonitor EMG System, for a Trigno EMG System, or for demonstration purposes, please skip this section.



**Consult the documentation provided with the National Instruments data acquisition device for software and hardware installation instructions.**



**The National Instruments software and drivers must be installed prior to installing or connecting the data acquisition device.**

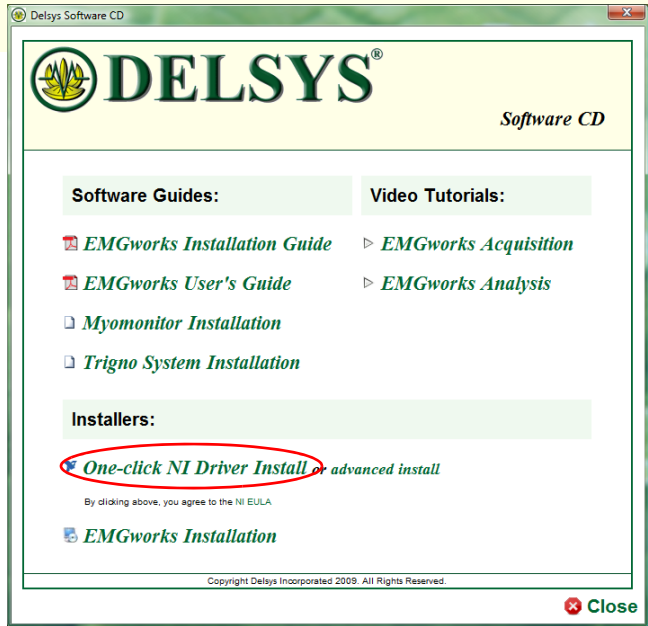


**If EMGworks is being used with a National Instruments E-series data acquisition device, the National Instruments Traditional Legacy Drivers must be installed.**



**If you received EMGworks on a CD and have a newer (M-series) data acquisition card, you can install the necessary drivers with a single click.**

1. Insert the Delsys Software CD into the computer. If you do not see the installation screen after you insert the CD, navigate to **My Computer** and double-click on the CD drive with a Delsys icon.



2. Click **One-click NI Driver Install**. The install will proceed automatically. You may be prompted to reboot your computer upon installer completion.

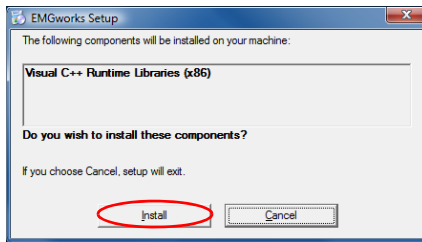


Once the data acquisition device is installed, verify that it is operating correctly before running EMGworks. This is done by running the Test Panels as described in the National Instruments documentation. An error will be generated when data acquisition is started in EMGworks if the device is not operating correctly.

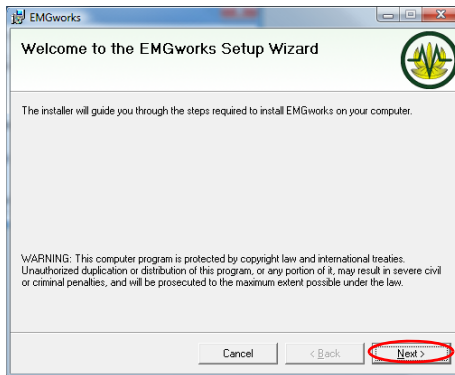
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# Installing the EMGworks® Software

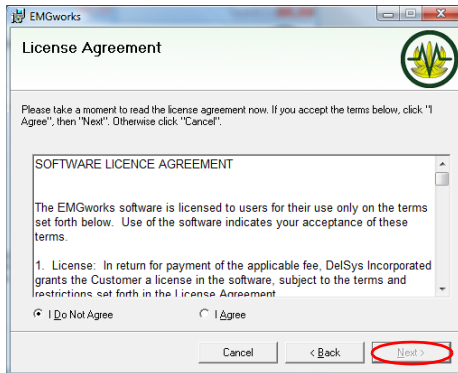
1. Insert the Delsys Software CD into the computer, if you received the software on CD. If you do not see the installation screen when you insert the CD, navigate and click on the CD drive with a Delsys icon in My Computer. Then, click EMGworks Installation on the software menu. If you downloaded the EMGworks installation program from the Internet, you should locate the downloaded file and double-click it to start the installation program.



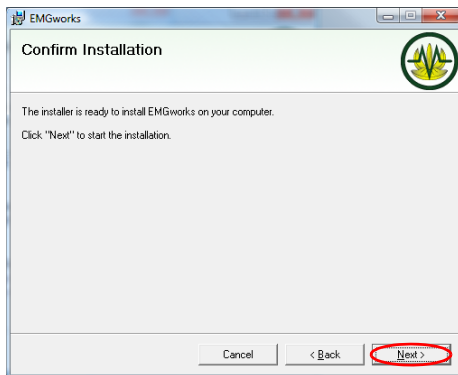
2. You may be prompted to install the *Visual C++ Runtime Libraries*. Click **Install**.



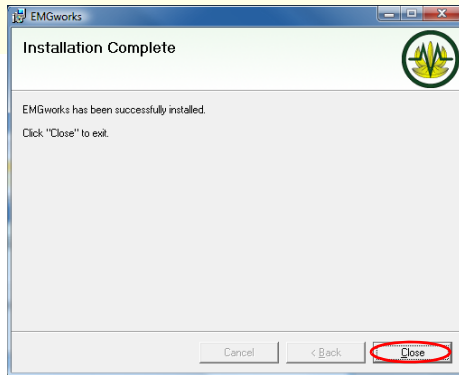
3. The **Welcome** dialog box will appear. Click **Next** to continue.



4. The **License Agreement** dialog box will appear. If you agree to the terms of the license agreement, select "I agree" and click **Next**.



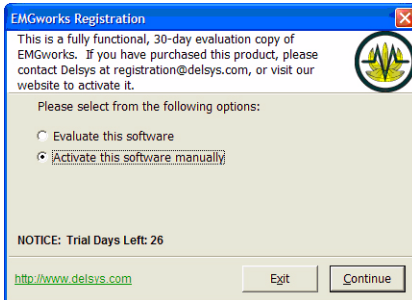
5. The **Confirm Installation** dialog box will appear. If you are ready to begin installation, click **Next**. The progress of the installation will be indicated with a progress bar.



6. The **Installation Complete** dialog box will appear when all of the components of EMGworks are installed. Click **Close** to complete the installation.

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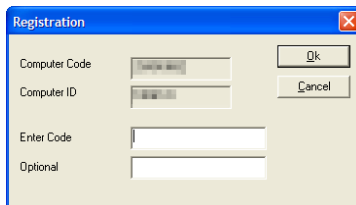
## Using EMGworks for the First Time



When EMGworks Acquisition or EMGworks Analysis is operated for the first time, the **EMGworks Registration** dialog box will appear.

In all cases, the program is available as a fully functional 30-day demo. If you have not purchased EMGworks, choose **Evaluate this software** and click the **Continue** button to run the program in un-registered demo mode. This screen will appear every time that EMGworks is run. After the 30-day demo period expires, the program will be disabled. The program can be reactivated by purchasing a licence and registering the software with Delsys.

Users who have purchased the software should register the program within the 30-day demo period. To register the program, choose **Activate this software manually** and click **Continue**.



The **Registration** dialog box displaying the Computer Code and Computer ID will appear. Visit the EMGworks section at [www.delsys.com](http://www.delsys.com) to register the program. Typically, Delsys will issue an activation code within 48 hours. While waiting for the code, the program can be run in the un-registered demo mode.

When the activation code is received, enter it in the **Enter code** field and click **Register**. EMGworks will start and the

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registration screen will no longer appear each time the program is started.



**Please refer to the “EMGworks User’s Guide” for full details on the use of EMGworks.**

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# What's New In EMGworks®

## Version 3.7

- Support for Trigno EMG System.
- Integrated biosensor calibration wizard.
- Ability to overlay adjacent channels on the same plot during acquisition.
- EMGworks Analysis calculations are performed in the background and can be run in parallel.

## Version 3.6.1

- Ability to reposition and collapse plots via drag and drop in EMGworks Acquisition.
- Improved Myomonitor connectivity as well as more helpful error messages.
- Improved USB-6009 performance when paired with an improved A/D cable.
- Ability to perform calculations on large files regardless of system memory.
- Batch import of text or CSV files with additional options.
- Ability to use folders to organize plots in the workspace.
- Custom trace settings, including stem plots, filled plots, 7 line styles, and 14 point marker styles, with additional functionality for overlaid plots.

## Version 3.6

- Windows Vista support, including upgraded Myomonitor support.
- New EMGworks Analysis calculation options and a new normalize calculation.
- Upgraded EMGworks Analysis usability and user interface, including new features in plotting and workspace management.

## Version 3.5.1

- Upgraded EMGworks Acquisition including improved interfaces when creating a test and choosing a hardware configuration.

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- Upgraded EMGworks Analysis including new calculation options, bug fixes in text file import functionality, and plot printing improvements.
  - Upgraded EMGworks Analysis Reports, including an option to print values on bar graphs.
  - Added support for manual stop triggers.
  - Bug fixes in Myomonitor automatic configuration utility.
  - Improved integration with Windows Explorer.

### **Version 3.5**

- Added EMGworks Analysis Reports (Gait report and Amplitude report).
- Automatic configuration of the wireless network when using a Myomonitor device (Windows XP only).
- Support for National Instruments M-series family DAQ devices has been added.
- Support for National Instruments USB-6009 DAQ device has been added.
- Support for wireless start trigger output has been added when using a Myomonitor device.

### **Version 3.1.5**

- Updated dicalc.dll to address runtime errors with MDF and MEF calculations.

### **Version 3.1.4**

- Added Example files for tutorials.

### **Version 3.1.3**

- Upgraded Analysis component resulting in additional calculations (threshold, rate, and histogram), enhanced text import function.
- Updated Analysis component to address issue in PSD calculation, MDF calculation, MEF calculation.

### **Version 3.1.2**

- Upgraded Acquisition component resulting in additional support for wireless Myomonitor and demo hardware configurations.

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- Upgraded Analysis component resulting in additional calculations (scale, remove mean, simple math, filters), video playback, and enhanced export functions.
  - Updated registration process.
  - Added Example files to the installation.
  - Enhanced online help/printed manual with extended tutorials.
  - Matlab script for reading EMG files directly into Matlab is made available in the Util folder on the installation CD.