

Ludlum Luminic Data Logger Software Manual
Version 1.1.xx

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Introduction

The LMI Lumeric Data Logger Software allows for the configuration and data I/O of certain Ludlum instruments that are arranged to have internal data storage.

Note: Only model 3000 series (excluding the model 3276) with the data logging option can use this software.

Attributes will vary by instrument, but in general, the LMI Lumeric Data Logger software has the following features:

- View Data log parameters of device
- Change Data log parameters of device
- Read/Change device's real time clock (RTC)
- Read Data log records
- Save Data log records to a file
- Read Location ID fields
- Load all or part of Data log settings

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Getting Started

The LMI Lumic Data Logger Software can be run on a desktop computer or in a virtual machine.

Minimum Requirements

- **Supported Operating Systems:** Windows 7 32-bit and higher
- Computer with Intel or compatible 1 GHz or faster processor (2 GHz or faster is recommended)
- Minimum of 256 MB of RAM (1 GB or more is recommended)
- 1 GB of free hard disk space
- .Net Frameworks 4.5 or greater

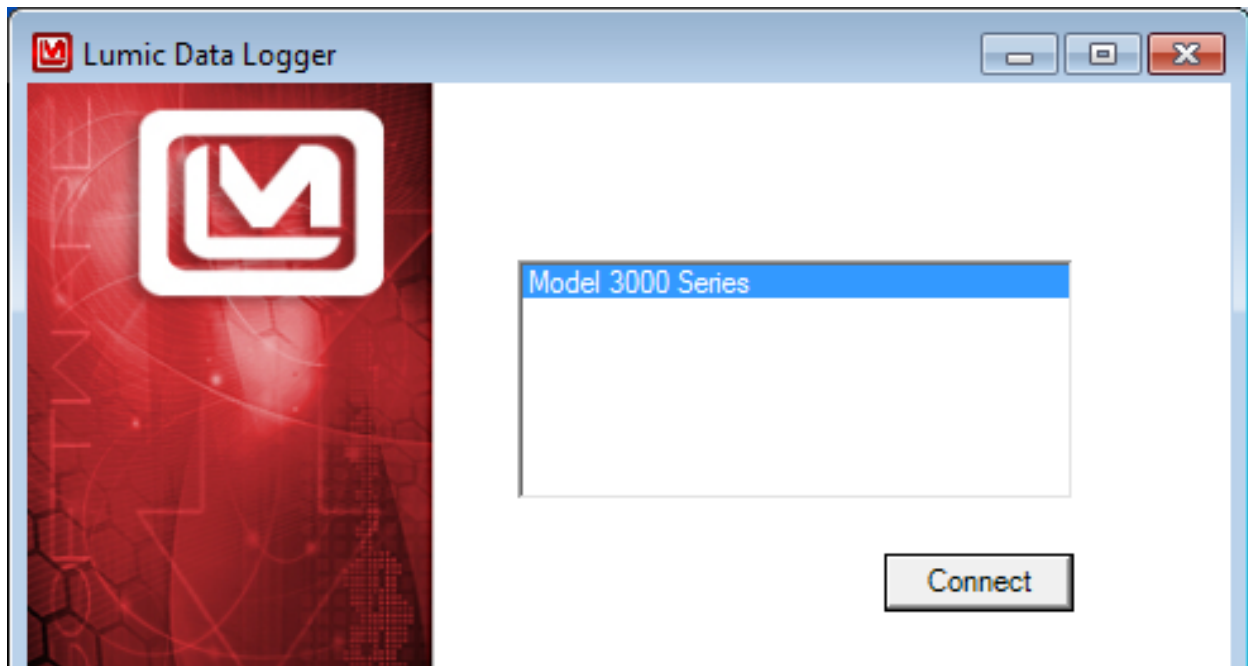
Installation

To install the LMI Lumic Data Logger Software, run the installer MSI from the installation CD and follow the on-screen prompts.

The default installation location on 64-bit machines is: "C:\Program Files (x86)\ Ludlum Measurements, Inc\Ludlum Lumic Data Logger.

On 32-bit machines, the default location is: "C:\Program Files\ Ludlum Measurements, Inc\Ludlum Lumic Data Logger.

Connect to a Device

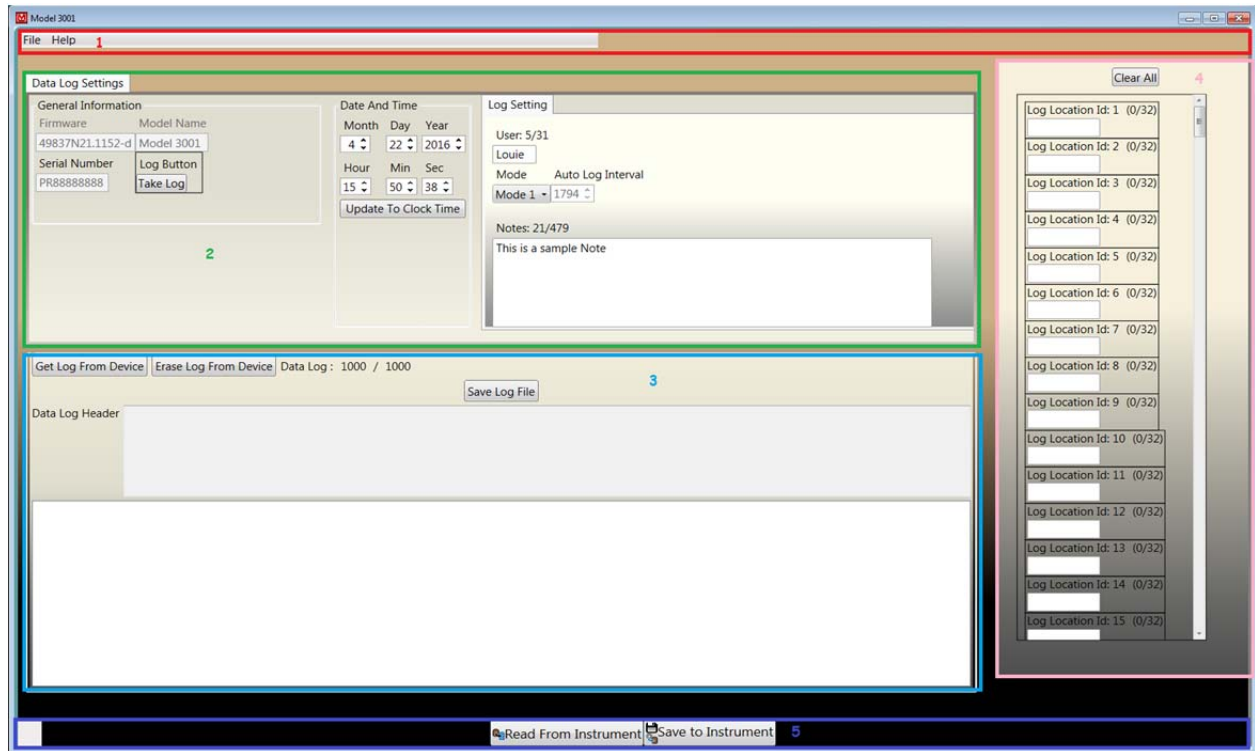


The Connect screen allows the user to connect an instrument to the program.

The user connects a Device to the program by selecting the Device's name from the list and clicking the "Connect" button.

Main Screen

When a particular instrument is chosen (in the previous step), a loading bar is shown while all the instrument's parameters are loaded into the computer. Once the loading bar completes, you will be taken to the instrument main window. In this screen there are five main features.

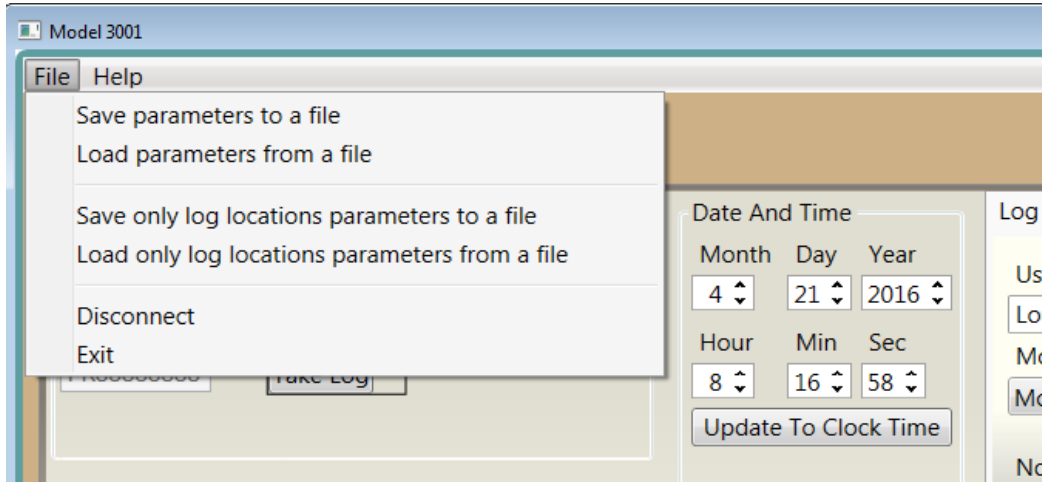


- The Main Toolbar #1
- Data Log Settings #2
- Data Log #3
- Location Toolbar #4
- The Taskbar #5

The Main Tool Bar

The main tool bar consists of two menu choices – “File” and “Help.” Clicking on a menu item will expand the menu, showing all options contained within.

File



The “File” menu contains seven options to select from:

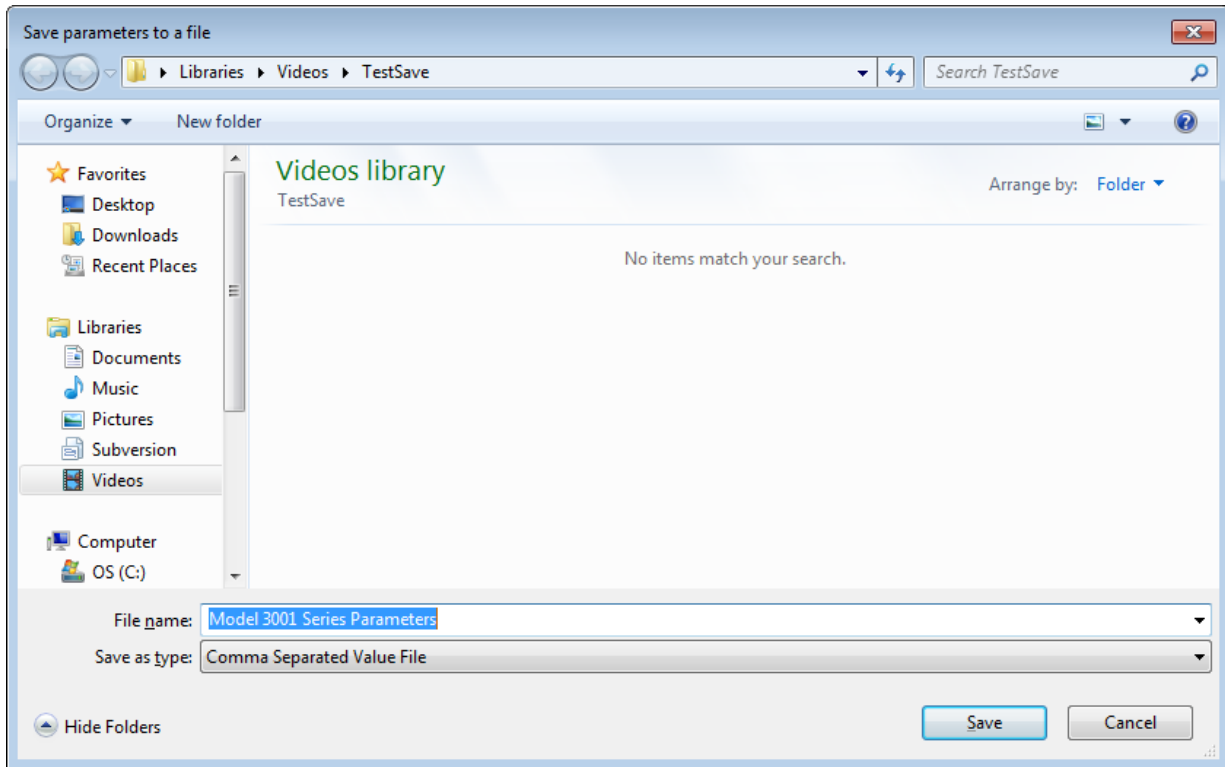
- Save parameters to a file
- Load parameters from a file
- Save only log locations parameters to a file
- Load only log locations parameters from a file
- Disconnect
- Exit

Save Parameters to a File and Save Only Log Locations Parameters to a File

This option allows you to save your current Data log settings and/or Location IDs settings to a “csv” (Comma Separated Value) file.

The saved files can later be loaded back onto your instrument by clicking the “Load Parameters from a File” or “Load Only Log Locations from a File” menu option.

By clicking on the “Save Parameters to a File” option, the software will open up a Dialog window.



You may then enter your own name for the file and choose the destination to save the software. Once the Save button is clicked, your data log parameters will be saved to the location you chose, or by default to the location you last saved a file.

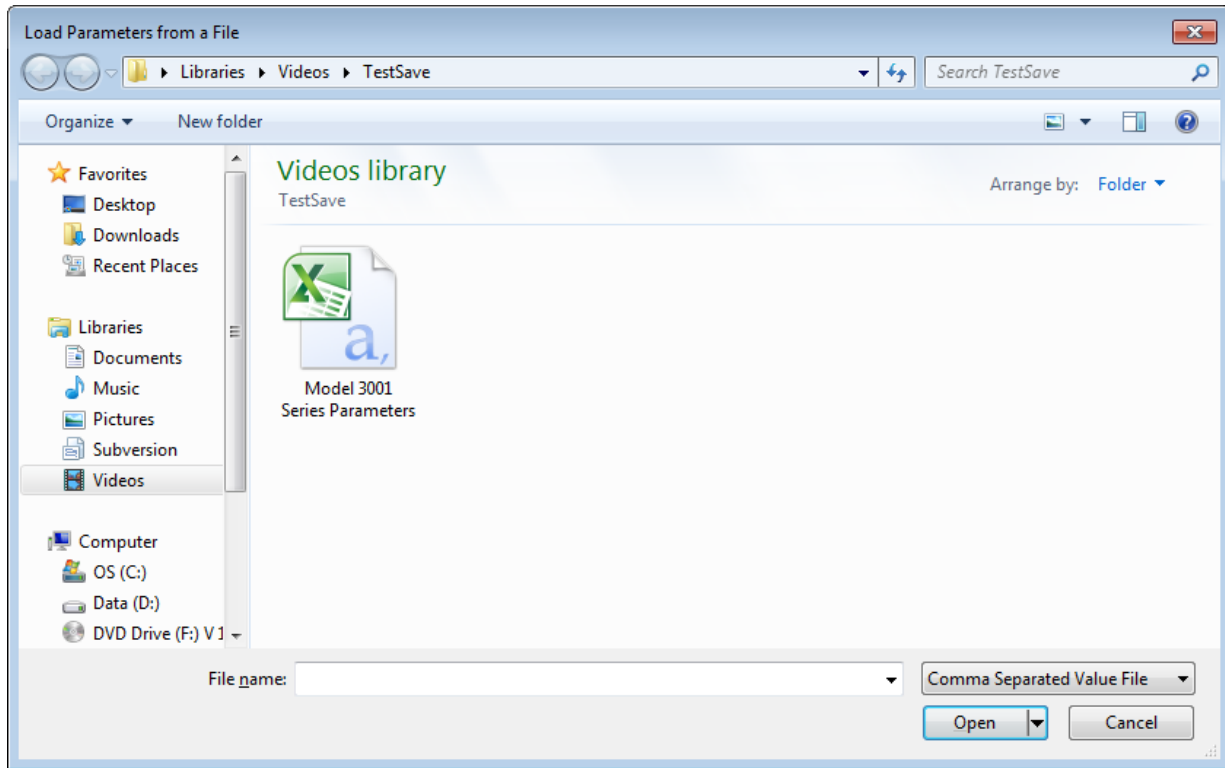
Load Parameters from a File and Load Only Log Locations from a File

This option allows you to load the log settings from a “csv” file or a “yaml, yml” file.

Note: If you are loading locations, a third file type is accepted – “txt” (Text) file.

Make sure you only use csv files that have previous instruments’ data contained. Otherwise, this option will not load any parameters.

By clicking on the “Load Parameters from a File” or the “Load Only Log Locations from a File” options, the software will open up a Dialog window.



This will show previously saved csv files. Please select a csv that was made by the Data log software. Once a csv file is highlighted, click the Open button in the bottom, right corner to load parameters from the file back to the instrument. This will automatically load all data from the Save file into the instrument. If the Save file was edited and some values went beyond bounds, it will reject only the out-of-bound settings.

Disconnect

This option disconnects you from the current device and takes you back to the Instrument Connection screen.

Exit

This option ends the software and closes all connections.

Note: If the user has not saved any changes when disconnecting or exiting , the program will ask the user if the changes are to be saved to the instrument .

Help

Help contains a link to the most current manual. Also in the Help drop-down selection is "About This Software". When selected, the software version number will be displayed.

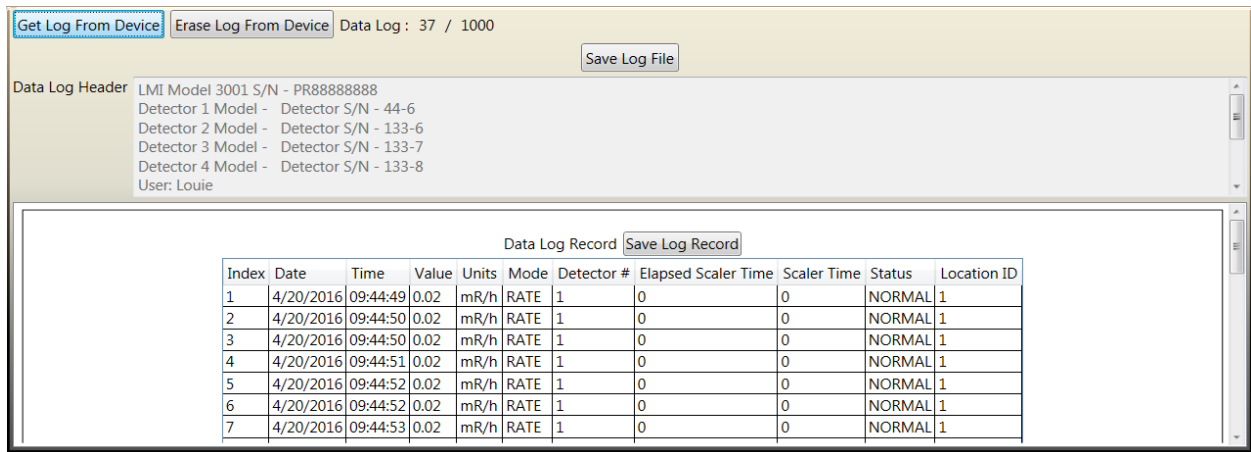
Taskbar

The Taskbar is not a true screen, in and of itself, but appears at the bottom of the Main screen once the user has connected to an instrument.

The user can write any changes to the device at any time by clicking the “Save to Instrument” button.

The user can read data log parameters from the device at any time by clicking the “Read from Instrument” button.

Data Log



The screenshot shows a software interface for viewing data logs. At the top, there are buttons for "Get Log From Device", "Erase Log From Device", and "Save Log File". The "Data Log : 37 / 1000" indicator is visible. Below the buttons is the "Data Log Header" section, which contains the following information:

- LMI Model 3001 S/N - PR88888888
- Detector 1 Model - Detector S/N - 44-6
- Detector 2 Model - Detector S/N - 133-6
- Detector 3 Model - Detector S/N - 133-7
- Detector 4 Model - Detector S/N - 133-8
- User: Louie

Below the header is the "Data Log Record" section, which contains a table of records. A "Save Log Record" button is located above the table.

Index	Date	Time	Value	Units	Mode	Detector #	Elapsed Scaler Time	Scaler Time	Status	Location ID
1	4/20/2016	09:44:49	0.02	mR/h	RATE	1	0	0	NORMAL	1
2	4/20/2016	09:44:50	0.02	mR/h	RATE	1	0	0	NORMAL	1
3	4/20/2016	09:44:50	0.02	mR/h	RATE	1	0	0	NORMAL	1
4	4/20/2016	09:44:51	0.02	mR/h	RATE	1	0	0	NORMAL	1
5	4/20/2016	09:44:52	0.02	mR/h	RATE	1	0	0	NORMAL	1
6	4/20/2016	09:44:52	0.02	mR/h	RATE	1	0	0	NORMAL	1
7	4/20/2016	09:44:53	0.02	mR/h	RATE	1	0	0	NORMAL	1

The Data Log screen displays any currently loaded Data Log records and allows the user to save said records to the computer.

The user can load the Data Log from the currently connected device by clicking the “Get Log from Device” button.

The Data Log screen displays the current header information of the log in the Data Log Header text box and all of the current Data Log Record Groups and their records in the Records list.

Note: Most devices will only have a single record group.

Users can erase all current Data Log Records from the device by clicking the “Erase Data Log Records in Device.”

Once a Data Log is loaded into the program, the user can save that Data Log as a text file to the computer using the “Save Log File” button. This action saves everything, including the Header.

Once a Data Log is loaded into the program, the user can save each record group as a csv file using the “Save Log Record” button. This action saves records only.

Data Log Settings

The screenshot displays the 'Data Log Settings' interface. It is organized into three main panels. The 'General Information' panel on the left contains fields for 'Firmware' (49837N21.1152-d), 'Model Name' (Model 3001), and 'Serial Number' (PR88888888), along with a 'Log Button' and a 'Take Log' button. The 'Date And Time' panel in the center features dropdown menus for 'Month' (4), 'Day' (22), and 'Year' (2016), as well as 'Hour' (15), 'Min' (50), and 'Sec' (38), with an 'Update To Clock Time' button below. The 'Log Setting' panel on the right shows 'User: 5/31' with a text input field containing 'Louie', a 'Mode' dropdown set to 'Mode 1', and an 'Auto Log Interval' field set to '1794'. At the bottom of this panel, it indicates 'Notes: 21/479' and contains a text area with the text 'This is a sample Note'.

The Data Log Settings screen displays the currently known Data Log Settings of the connected device. The Data Log Settings will be displayed when the user clicks the “Read from Instrument” button on the Status Bar.

The following settings are displayed on this screen:

- Date and Time
- User
- Current Location Mode
- Current Data Log Notes

The user can directly edit the displayed Real Time Clock by clicking in each of the date and time fields and manually adjusting them, or selecting the “Update To Clock Time” will change the instrument’s time and date to match the computer’s time and date settings..

The user can change the device’s user by entering the desired new alpha and/or numeric text into the Device User field.

The user can change the current Locations Mode by selecting the desired mode from the drop-down list.

The user can change the current Data Log Notes by entering the desired alpha and/or numeric text into the Data Log Notes field.

Note: To save changes to the Instrument, click “Save to Instrument.”

The screenshot shows a software interface with a 'Clear All' button at the top. Below it is a list of 15 'Log Location Id' fields, each with a corresponding input box and a '(0/32)' indicator. The fields are numbered 1 through 15. The interface has a light yellow background and a vertical scrollbar on the right side.

Locations

A user can clear all of the displayed Location IDs by clicking the “Clear All” button.

The user can change the current Location IDs by entering the desired alpha and/or numeric text into the Location Id field.

Note: To save changes to the Instrument, click “Save to Instrument.”

User Guide

This is a general guide on how to use this software.

General User Scenarios

These are the simple tasks that all users will need to be able to do in order to use this program. Launch the LMI Lumatic Data Logger Software.

From the Desktop (Windows 7 or 8)

1. Double-click on the icon.

From the Start Menu (Windows 7)

1. Open the Start Menu.
2. Click All Programs.
3. Click the folder named “Ludlum Measurements, Inc.”
4. Click the folder named “Ludlum Lumeric Data Logger.”
5. Click the “Ludlum Lumeric Data Logger” icon.

From the Start Menu (Windows 8)

1. Open the Start Menu.
2. Type “Ludlum.”
3. Click “Ludlum Lumeric Data Logger” in the search results area.
 - a. For quick access, right-click the “Ludlum Lumeric Data Logger” icon in the search results and click “Pin to Start Menu” from the context menu.

Connect to a Device

1. Launch the LMI Lumeric Data Logger Software.
2. Log in.
3. If you have not already done so, connect the device to the computer.
4. Click the name of the product in the list of connected devices in the Connect to Device screen.
5. Click the “Connect” button.

Troubleshooting

Missing .Net Framework

DotNet Framework comes with most standard Windows desktops. However, if for some reason while installing or after installation you are still missing .NetFramework, please go to MSDN and download 4.5 Framework for your machine.

No Devices Showing Up

1. Check to make sure everything is properly connected.

2. If that is correct, check to see if Microsoft Windows is still installing the drivers for the instrument. This may take a few moments. (If you have multiple new instruments on a daily basis, FAQ question, "Calibration on different devices," may speed this up.)
3. Make sure the instrument is on, and if it is, try turning it off and then on again.
4. Change USB cable.
5. Check USB driver. Sometimes while installing the driver you may run into an issue, i.e. power shuts off, instrument unplugged, Windows update, etc. This may cause your driver to become corrupt, and the instrument will no longer show in Lumatic. To check for this issue, follow these steps.
 - a. Unplug all other instruments. Plug in and turn on the instrument.
 - b. Open "Device Manager."
 - c. Expand the Human Interface Devices drop-down menu. ***If you can see your instrument's family name, i.e. Model 3000, Model 30, under the Human Interface Device Section, then Issue 5 is the cause. If you cannot, please call Ludlum Measurements.***
 - d. Right-click on appropriate family name Instrument and select uninstall.
 - e. Let Windows uninstall the driver
 - f. Disconnect the instrument.
 - g. Reconnect the instrument.
 - h. Windows should auto-reinstall the Instrument.
 - i. When Windows shows the driver has been installed successfully, re-open Lumatic and see if menu is still empty.

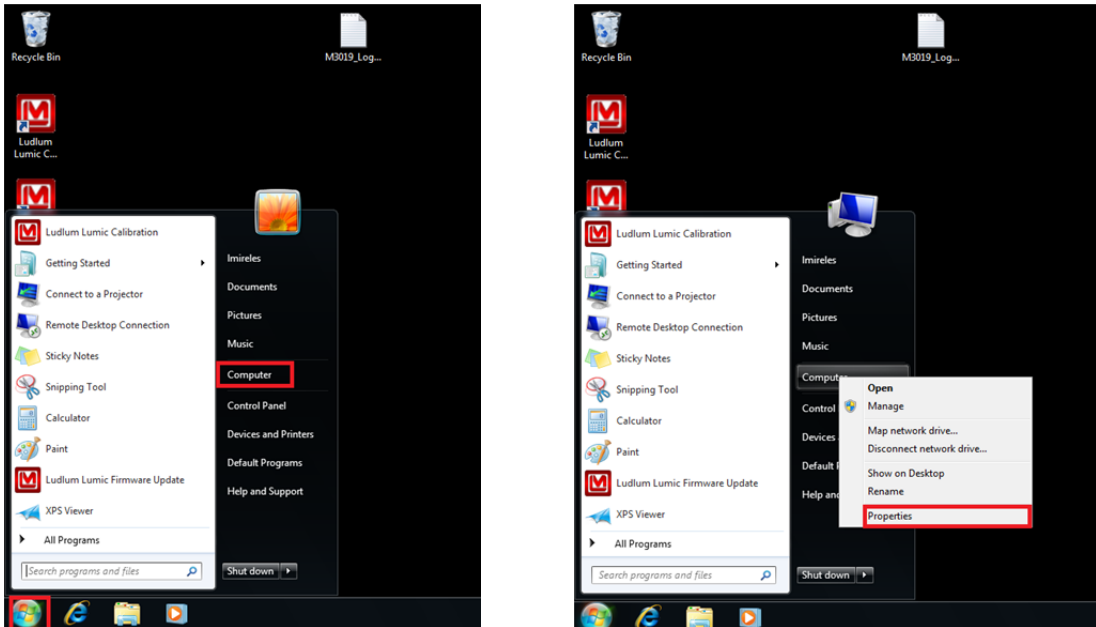
If none of the above solves your issue, please feel free to call Ludlum Measurements.

Calibration on Different Devices

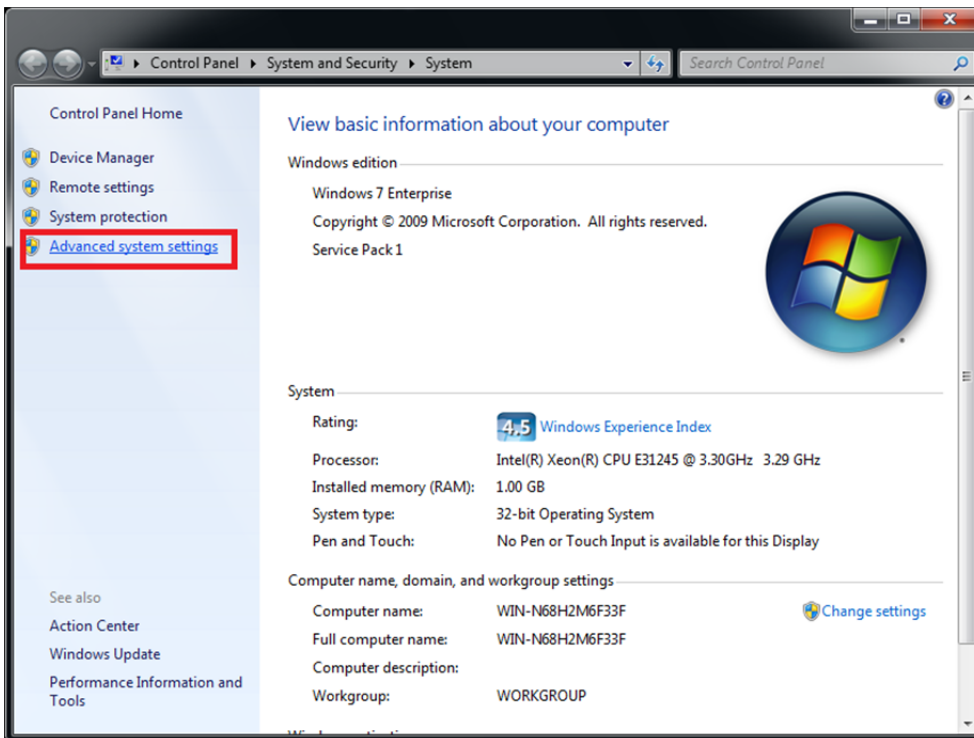
If your computer is running Windows 7 or higher, when a new device is connected to your computer, Windows may spend up to 15 minutes searching for the drivers through Windows update. This is unnecessary and time consuming if you are plugging in different new instruments. In order to avoid this, change some system settings on handling drivers. (See the following steps.)

Windows 7

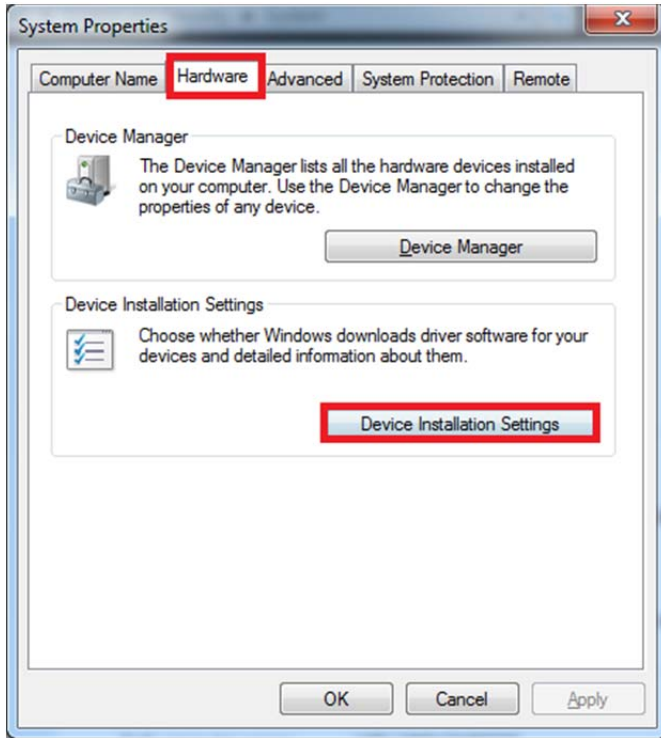
- Click Start, right-click "Computer," and choose Properties.



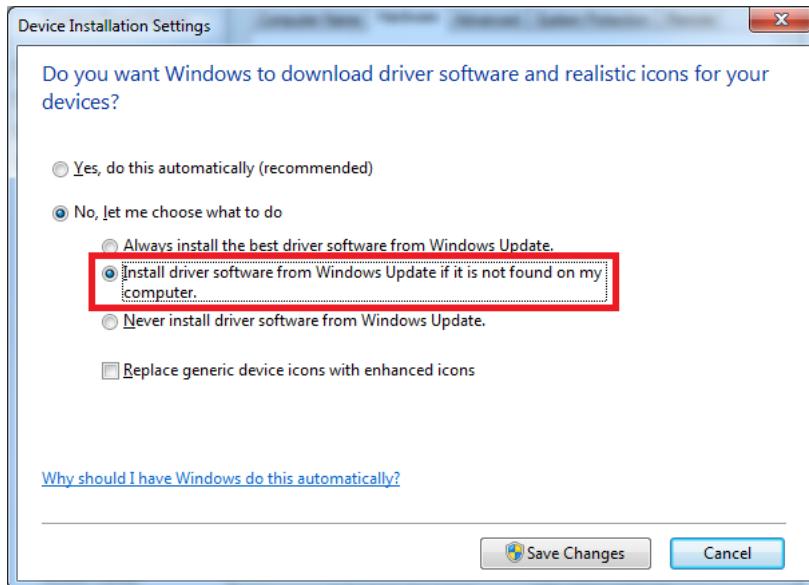
- In the System window, click Advanced System Settings.



- On the System Properties dialog box, click the Hardware tab, and then click “Device Installation Settings.”



- Then select “Install driver software from Windows Update if it is not found on my computer” or “Never install driver software from Windows Update.”

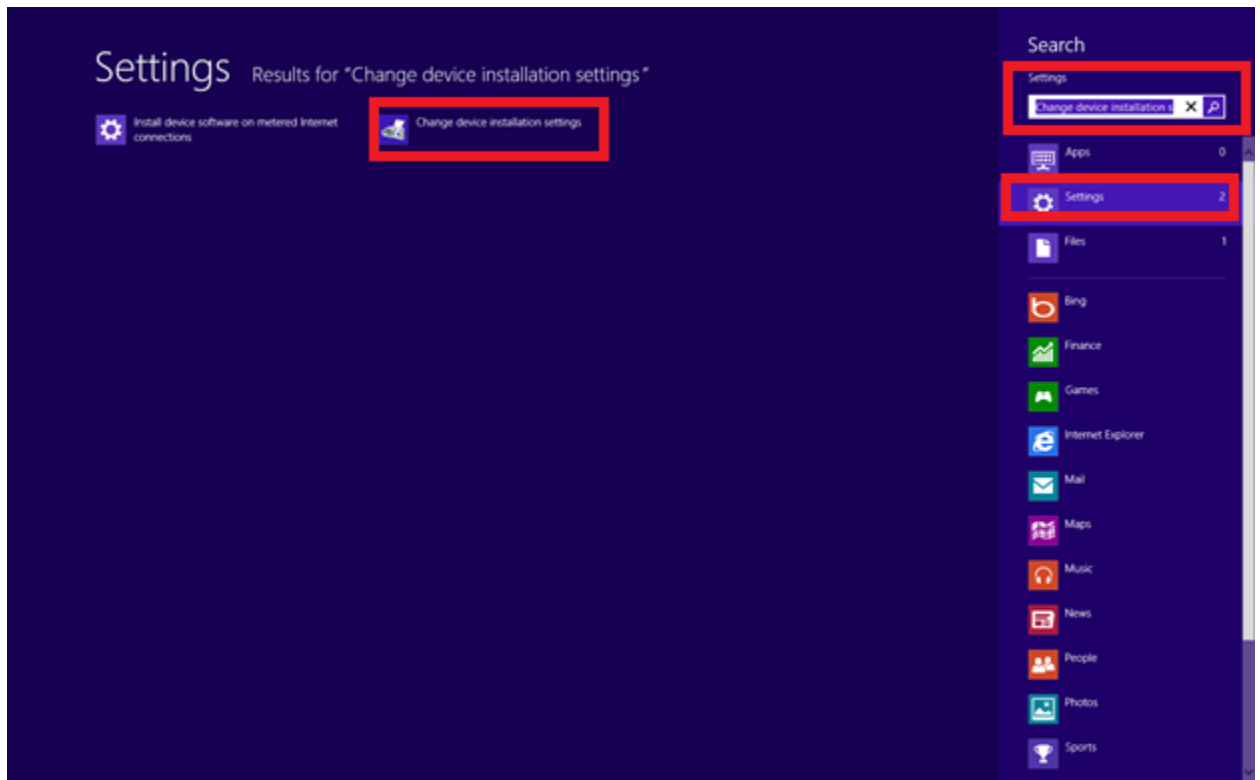


Windows 8 and 10

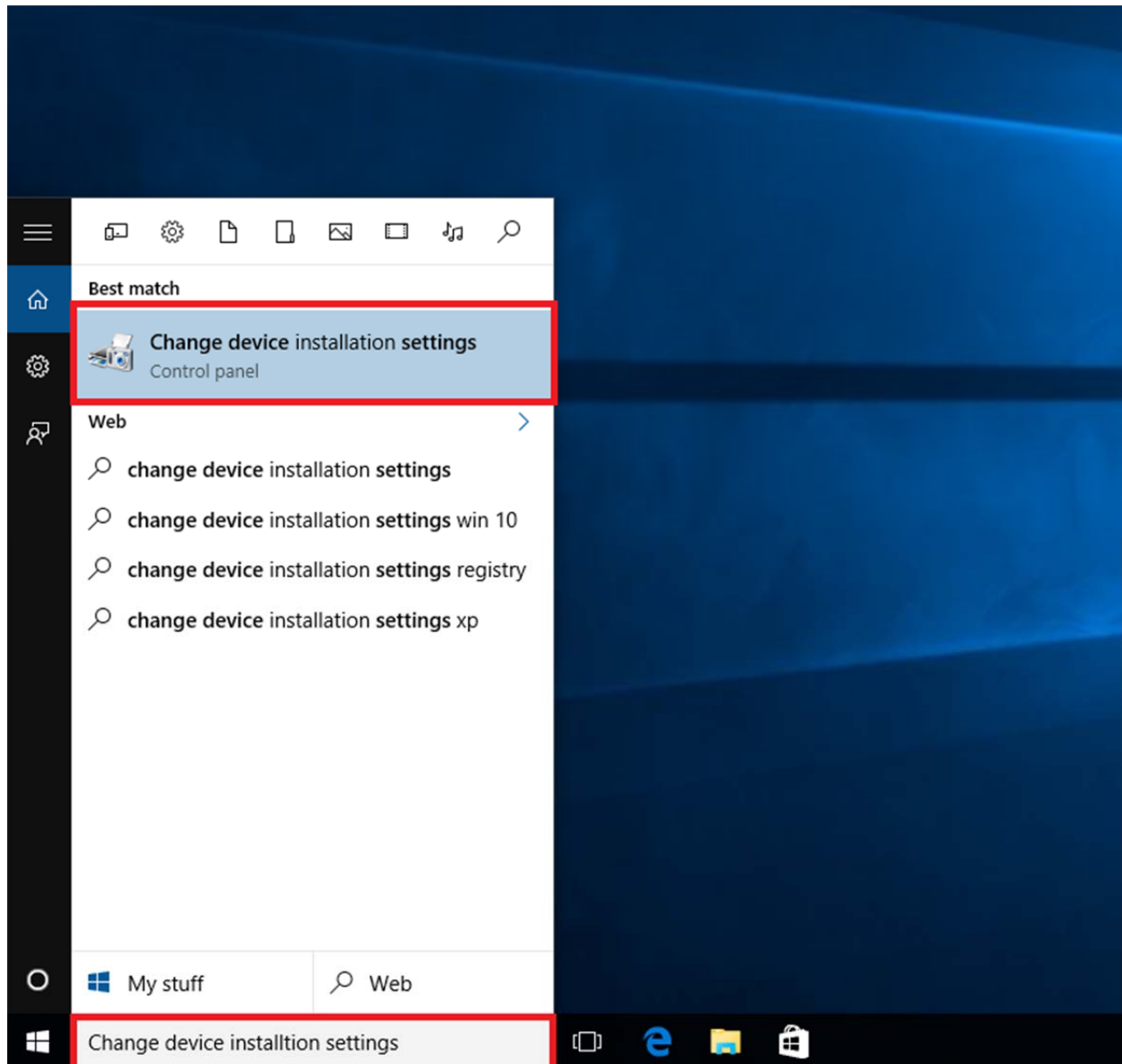
Unfortunately for Windows 8 (and higher), you only get the choice of using Windows Update always or never.

- Search for "Change device installation settings" in the Windows 8 Start menu and select "change device installation settings."

Windows 8

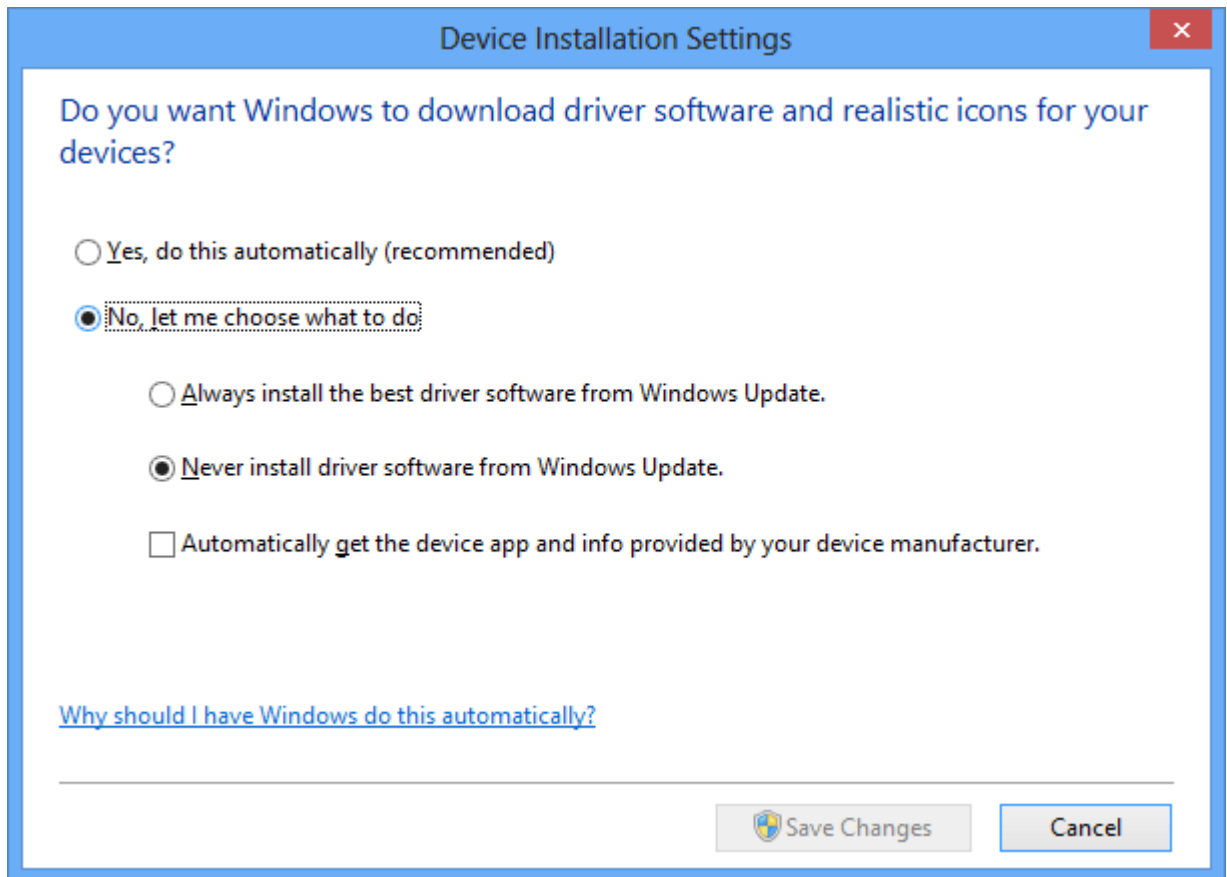


Windows 10



- In answer to the question "do you want Windows to download driver software" choose "no, let me choose what to do," then select "never" and save changes.

Note: This is dangerous. Some drivers may not install from other companies without this option. This is not recommended.



Instrument Addendum

For the Model 3000 Series Instruments

The user can change the current Locations Mode by selecting the desired mode from the drop-down list.

There are currently 3 common modes for most devices.

Note: Older firmware many only have two.

Note: Please refer to your instrument's manual.

1. Manual
2. Manual (with selectable locations)
3. Auto (Continuous logging mode)