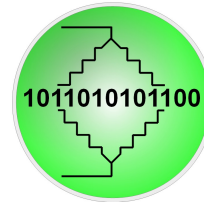


Intelligently Designed Systems  
P.O. Box 4922  
Los Alamos, NM 87544

(505) 709-0726  
www.intdsys.com  
contact@intdsys.com



Feb 17, 2014

## **Installation instructions for Dataq DI-149 Signal Counting Software**

This program provides basic data acquisition from the Dataq DI-149 voltage data acquisition module. The program acquires data from the DI3 counter (channel 10), prints it to the screen and logs it to a comma-separated-value text file. There are also user adjustable alarms triggered by the total counts exceeding a pre-determined level. This program is meant to be a product demo and it can be used as the starting point for developing custom data logging software to address your specific requirements. Contact Intelligently Designed Systems for any installation or operation problems or to discuss customizing and expanding the program to meet your needs.

### Capabilities

- Counts signals acquired by the Dataq DI-149 voltage data acquisition module.
- Counts up to 999999 total counts
- Logs total counts as a function of time to comma-separated-value text file.
- User set-able audible and visual alarms.
- Should work with signal rates up to 5 kHz. Tested up to 150 Hz so far.
- Logging periods adjustable from 1/sec to 10/sec.

### Requirements

- Dataq Instruments DI-149 voltage data acquisition module.
- One available USB port on your computer.
- Windows: Windows XP service pack 3, Windows Vista SP 1, Windows 7 SP 1, or Windows 8. For Windows 8, install from the desktop and run from the applications Start Panel.
- Microsoft .NET Framework 4. (Will download automatically if not present)

### Installation of the Dataq DI-149 voltage acquisition module

- Purchase the DI-149 from Dataq. See [www.dataq.com/products/startkit/di149.htm](http://www.dataq.com/products/startkit/di149.htm)
- Do not plug the DI-149 into the computer yet.
- Download the driver from [www.dataq.com/145/145usbdriver.exe](http://www.dataq.com/145/145usbdriver.exe) This is also the driver for the 149 even though it is labeled as 145.
- Run the driver executable and the driver will be installed automatically.
- Plug the DI-149 into an available USB port and wait for it to install automatically.

- The Power LED will be lit but no others should be lit at the moment.

### Installation of dtq-DI149-SignalCounter software

- Create a folder on your C:\ drive named “dtqDI149”. Note that the letter before D is lower case Q, the letter after D is a an upper case i , and the number before the 4 is the number one. Fonts sometimes make this difficult to see.
- Extract the zipped download to C:\dtqDI149 and run setup.exe. Close the program the first time it runs using the red X on the window.
- The program should be accessible from the Start->Programs->IntDSys folder
- If not, right click the dtq-DI149-SignalCounter icon and create a shortcut.
- Move the shortcut to your desktop.

### Operation

- Attach the Cnt/DI3 channels of the DI-149 to your signal source. Max input is +/- 30 V. LO signal should be < 1.4 volts. HI signal should be > 1.8 volts.
- Run the dtq-DI149-SignalCounter software. If the 149 is detected, the counting screen will appear. If it is not detected, a message box will appear and the program will close. If this happens, try re-installing the driver and restarting the computer.
- When the counting screen is visible, set the target logging period.
- Set alarm levels and types as needed. Unchecking an alarm box will stop it.
- If needed, click the checkbox to start logging data to the file. This can be activated or deactivated at any time. Data is only saved when the box is checked. Each time the box is unchecked and re-checked, a new file is started.
- Click Start Counting to begin scanning from the DI-149. This automatically re-initializes its internal counter to zero.
- Click Stop Counting when finished. If the counting is stopped and restarted, the internal counter is reset to zero. Data logging to the file can be started and stopped regardless of whether the program is counting or not.

### Troubleshooting

- After installation, make sure to follow the steps above to close the program and restart.
- If the DI-149 is not found when the software is started, follow the steps above to re-install the driver and restart your computer.
- If the DI-149 is still not found, contact us for more help using [contact@intdsys.com](mailto:contact@intdsys.com).
- If an Unhandled Exception occurs when the checkbox is clicked to log data to a file, it means that the <C:\dtqDI149> folder is not available. Check your spelling and try again.