

Monitor - ISSN 1472-0221

The Newsletter for PC-Based Data Acquisition and Control
Issue 222, February 2017

Welcome to Monitor, the data acquisition and control newsletter. Thanks for subscribing. Don't forget that you can download our data logging and troubleshooting software, ComDebug, from <http://www.windmill.co.uk/comDebug/comdebug.zip>.

You can download Monitor as a pdf file from <http://www.windmill.co.uk/monitor/monitor222.pdf>.



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How to Interface a Vitrek High Voltage Meter

Web link: <http://www.windmill.co.uk/vitrek-voltmeter.html>

Windmill software lets you interface Vitrek HV meters, and other instruments with RS232 serial ports, to a PC running Windows. As a subscriber you can download software to do this from <http://www.windmill.co.uk/jsarrpsrr.htm>.



To use Windmill to collect data from a Vitrek HV meter:

Run ComDebug and choose Create a New Windmill Instrument File.

Choose *Serial Communications* and enter the Com port settings which match those your meter is using, for example

Baud	Select a baud rate on the meter via its Configuration Screen, eg 9600, and choose this.
Data Bits	8
Parity	None

Stop Bit 1

Flow Control Hardware

More Information: [4700 Precision High Voltage Meter Downloads](#)

Requesting and Receiving Data

After entering the COM port settings, choose to *Edit Message 1*. Use the NonPrint menu to enter the <CR> character.

Example Prompt Command Measurement query command followed by a Carriage Return, eg DCV?<CR>

Example data string received 12 characters starting with a + or -

Example [Parsing](#) Step 1 : Add Action : Ignore until +-
Step 2 : Extract : Extract Until <CR>

Assign a channel to hold the data you extract.

Click Step to check whether data is correctly extracted.

Instrument Timings

In the Main Menu select *Edit the Instrument Timings*.

Read Data Persistence Read Directly Longer than your sampling rate, so data doesn't expire between readings.
Instrument Idle Time 0
Timeout at least 100 milliseconds

Does it Work?

In the *Message Screen* click *Run* to check that everything is working. Save Settings and Create a Windmill Device in order to use the Windmill Logging and Charting programs.

For more information contact techsupp@windmill.co.uk.

Your Questions Answered: Saving Data from an RS422 Laser Sensor

Weblink: <http://www.windmill.co.uk/mettler.html>

Question

Your software works with our Mettler weight. My problem is that I have to take measurements while the weight is changing. (I need to take measurements each second, while i empty a bag of fluid in a container on the weight.) When the weight isn't changing it works fine, but when I start the flow of the fluid, and the weight is changing constantly, I get errors. Is there a way, to get data out, while the weight is changing continuously?

Answer

Instead of using a command to request a stable reading, use a command to immediately transmit the next weighing result without waiting for stability. For example, depending on the model of your balance, the command SI rather than S. You could alternatively set the balance to continually send weighing results. In this case make sure that, in ComDebug, you choose "Read in the Background".

If you have a question about using Windmill contact monitor@windmillsoft.com, techsupp@windmill.co.uk or call +44 (0)161 833 2782

DAQ News Round-up

Welcome to our round-up of the data acquisition and control news. If you would like to receive more timely DAQ news updates then follow us on [Twitter](#) - [@DataAcquisition](#) - or grab our [rss feed](#).

Simulated ransomware attack shows vulnerability of Industrial Controls

Cybersecurity researchers at the Georgia Institute of Technology have developed a new form of ransomware that was able to take over control of a simulated water treatment plant. After gaining access, the researchers were able to command programmable logic controllers (PLCs) to shut valves, increase the amount of chlorine added to water, and display false readings.

Source: Georgia Tech

<http://www.news.gatech.edu/>

Conductive rubber is breakthrough for soft electronics

Researchers have developed a thermally conductive rubber material that represents a breakthrough for creating soft, stretchable machines and electronics.

Source: Carnegie Mellon University

<http://engineering.cmu.edu/>

Pioneering chip extends sensors' battery life

A low-cost chip that enables batteries in sensors to last longer, in some cases by over ten times, has been developed by British engineers.

Source: University of Bristol

<http://www.bristol.ac.uk/>

Tippling points and their early warning signals

Large-scale sensor networks for structural health monitoring are becoming increasingly common, but there is currently no implemented method for pinpointing problems before damage occurs. A new algorithm to do this can be added to existing systems, according to the National Physical Laboratory.

Source: NPL

<http://www.npl.co.uk/>

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For previous issues by subject see <http://www.windmill.co.uk/monitorindex.html>

DOWNLOAD DATA ACQUISITION SOFTWARE

As a thank you for subscribing we offer you the ComDebug data logging and Com port trouble-shooting software. Log data over RS232, RS422, RS485 or Modbus. Also included is a month's trial of the Windmill 7 logging, charting and control programs. To download go to <http://www.windmill.co.uk/jsarrpsrr.htm>

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