



# **DATA LOGGING VOC METER**

## *SOFTWARE MANUAL*



# **VOC08**

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# TABLE OF CONTENTS

Installing the Driver and Software .....	2 – 3
Configuring the VOC08 .....	3 – 5
Deploying the Unit .....	6
Downloading, Viewing and Analyzing the Data .....	6 – 7

## ***DATA LOGGING MODE***

If you are new to data logging, be aware that—regardless of the parameter to be recorded—several steps must precede and follow actual data collection. They include:

1. Installing a Windows7/8/VISTA/XP-compatible driver for the VOC08 data logging program on the supplied mini-disc, followed by installation of the program
2. Selecting a sampling time and logging mode appropriate for the application. This is called “configuring” the instrument.
3. Deploying the instrument where the levels of the parameter over time are of particular interest. If logging is to last more than a few hours, the meter should be switched from battery power to AC power to avoid having the batteries discharge before logging is complete.
4. Starting logging, allowing the unattended instrument to collect hundreds or thousands of data points, and then stopping logging
5. Downloading the logs to a PC and saving them there
6. Displaying, printing or manipulating the logs in tabular or graphic form, to facilitate trending, analysis and detection of unexpected excursions

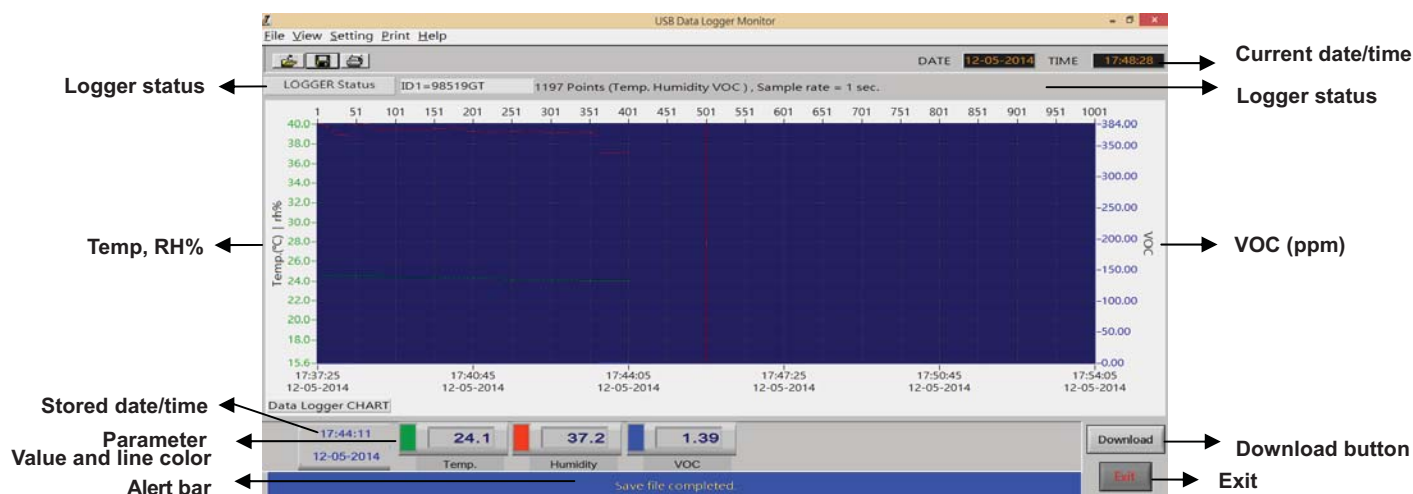
## **Installing the Driver and Software**

1. Place the mini-disc that came with the VOC08 in the tray of the host computer’s optical drive.
2. Extract folders from the zip file.
3. Double-click the <Volume> folder to open it.
4. Double-click the <user’s manuals> folder to open it. Copy the VOC08 Hardware Manual and VOC08 Software Manual to your PC's hard drive.
5. Click on <PL2303\_Prolific\_DriverInstaller\_v110.exe>. When the setup screen appears, click **NEXT** to continue.
6. Wait for the driver to install, and then click **Finished**.
7. Double-click <setup.exe>.

8. On the security screen that appears next, click **Run**.
9. On the Destination Directory selection screen that follows, click **Next** to store the data logging program in <C:\Program Files (x86)\Data Logger\>, or **Browse** to choose another destination directory.
10. On the following screen, click **Next** to begin the installation.
11. On the Installation Complete screen that follows, click **Finish**.
12. On the Data Logger screen that appears next, click **Restart** after saving and closing any open documents.
13. Following restart, note that the shortcut **VOC08 Data Logger** has been added to your desktop. To facilitate access to the program, right-click on the icon and pin it to both your **Start** button and the Quick Start area at the left of your taskbar. You can now eject the installation mini-disc and store it with your other important software.
14. Connect the VOC08 to your computer via the included USB cable. To do so, insert the MicroUSB plug at one end of the cable into the jack on the right side of the instrument and the full-size USB plug at the other end of the cable into a USB port of your PC.

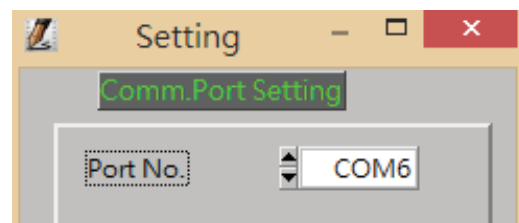
## Configuring the VOC08

To begin, double-click the **VOC08 Data Logger** icon on your desktop to open the program. The following screen will appear:

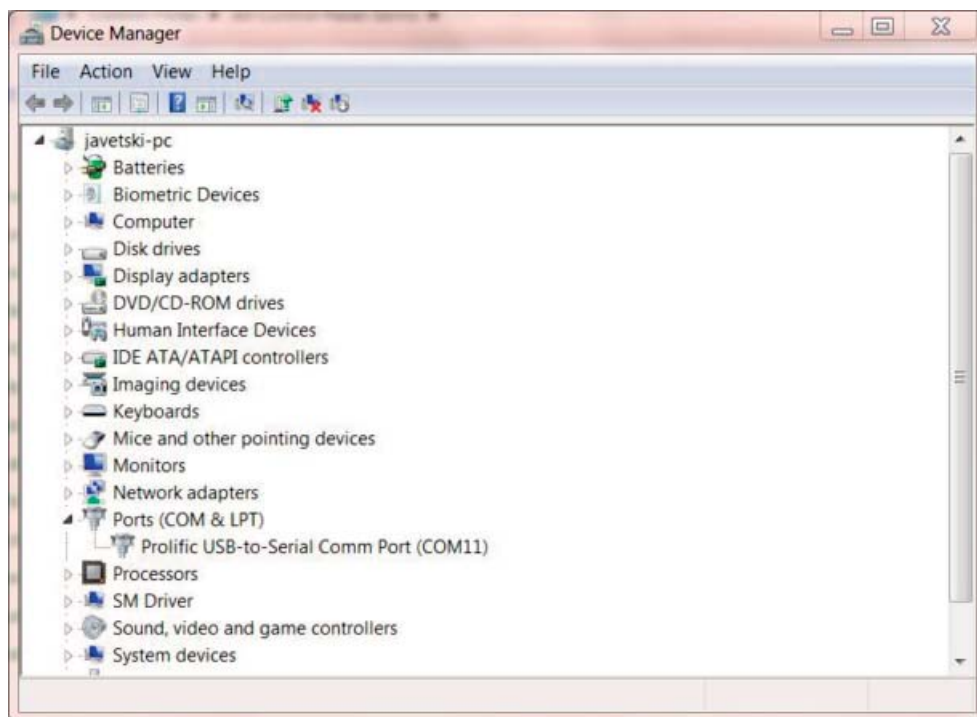


Configuring the VOC08 for data logging means choosing several actions and parameters by interacting with the program. Refer to the screen shot above and the screen shots on the following pages while following the text:

- Input the number of the COM port to which the meter is connected. To do so, left-click the **Setting** pulldown on the top line of the program and select **Comm.Port**. On the top section of the screen that appears next, use the up and down arrows to enter the COM port



number. If you do not know the number, open your PC's **Control Panel**, locate the **Device Manager** icon, and left-click it. Among the rows listing your connected peripherals is one named **Ports (COM & LPT)**. Expanding this row should reveal that one of the ports is the "Prolific USB-to-Serial Comm Port (COMX)" (see screen shot at right). This listing represents the USB cable you have plugged in. Enter the number that appears instead of the X following the term COM using the Comm.Port Setting pulldown.



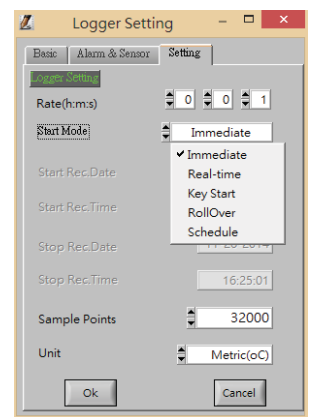
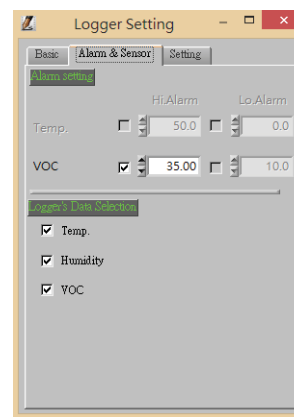
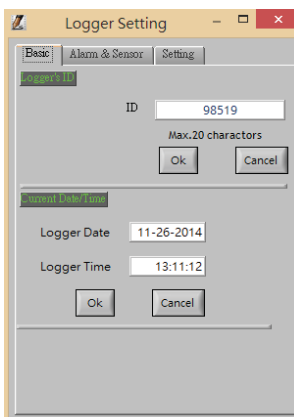
- Name your logger by entering up to 20 characters in the ID box (top section of left image on page 5). Use capital letters and/or numbers, with no spaces between terms. Then click **OK**.
- Click the **OK** box in the bottom (**Current Date/Time**) section (left image on next page).
- Adjust the high VOC concentration audible alarm (which has a factory default setting of 35.00 ppm), and program the meter either to track 1) VOC readings alone, or 2) VOC readings as well as ambient temperature and RH values (middle image on next page). As mentioned earlier, the 32,000 point memory of the VOC08 can be devoted entirely to VOC readings, or devoted one-third each to VOC, ambient temperature and RH readings.
- Choose a sampling time (top line of right image on next page), data logging start mode (middle section of right image on next page) and temperature unit (bottom line of right image on next page).

With regard to sampling time, using the shortest setting of 1 second may result in too much essentially identical data being stored in memory, potentially limiting its capacity to capture important events such as an unexpected excursion of a parameter. Conversely, using a sampling time measured in minutes may cause important events to go undetected.

If you are an experienced data logger, you already know how to choose the optimum sampling time for your application. If you are a novice, pick a sampling time closer to the minimum than the maximum sampling time (5 or 10 seconds is a typical setting), on the assumption that the VOC08 probably has enough memory (32,000 locations) to store all the data you ask the meter to log—unless you want to log data for months

or weeks, rather than a few days. Even using a relatively fast sampling time of 5 seconds to log VOC, temperature and RH, it would take more than 14 hours to fill up the meter's memory

- Select a logging start mode. The options (middle section of right image below) are:
  - **Immediate:** Logging begins when the **OK** button is pressed. Logging will stop when the memory is full or the **DOWNLOAD** button is pressed.
  - **Real-time:** In this mode, logging also can be started by pressing the **OK** button—as long as the meter remains connected to a PC. By keeping the meter connected, measurements of VOC concentration, ambient temperature and RH can be viewed on both devices. The downside of this mode is that the PC must accompany the VOC08 into the field. Logging can be stopped by pressing the **STOP** button. Data can be saved as an ASCII (.csv) or .txt file by clicking the disc icon at the upper left of the program.
  - **Key Start:** The advantage of this mode (and Rollover mode, described below) is that logging can be started and stopped simply by pressing and holding the **BKLT** button on the VOC08 after pressing the **OK** button—with no need for a PC to be present. Before starting the next recording session, you must first download the data from the previous session by pressing the **DOWNLOAD** button. Logging will stop when the memory is full or the **DOWNLOAD** button is pressed.
  - **Rollover:** There is only one difference between this mode and Key Start mode. In Rollover mode, if logging is ongoing when 32,000 points have been captured (filling up the meter's memory), logging will continue, but with new data overwriting old. In Key Start mode, when the memory fills up, logging stops. Before starting the next recording session, you must first download the data from the previous session by pressing the **DOWNLOAD** button. Logging can be stopped by pressing the **DOWNLOAD** button.
  - **Schedule:** In this mode, you determine the date and time when recording begins and ends by changing the content of the four fields below the **Start Mode** pulldown. Note that the initial content of the fields reflects the current time and date because installing the data logging program automatically syncs it to your PC's clock. Logging can always be stopped by pressing the **DOWNLOAD** button.
- Choose °F or °C as the unit of ambient temperature (bottom line of right image). The selected unit will become the default until the meter's batteries are changed.





## Deploying the Unit

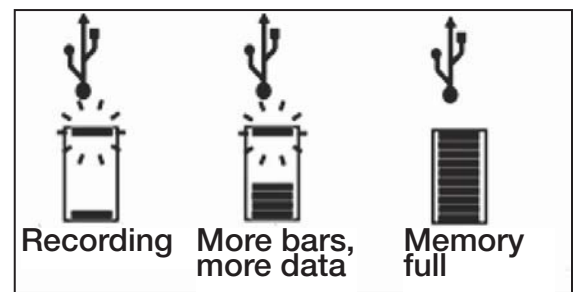
For long-term data logging, General advises using the included AC adaptor to avoid having the batteries that normally power the meter fully discharge before logging is complete.

To avoid having the meter's Auto Power Off (APO) function activate before a data logging session is completed, you must manually disable the function. To do so, with the meter powered off, power it on in a special way by pressing the holding the **PWR** and **HOLD** buttons at the same time. When the meter powers on, a small **n** will briefly appear on the LCD.

If the meter powers off for any reason while logging, captured data is not lost because it is stored in nonvolatile memory.

During logging, the 10-segment vertical bar graph at the bottom left of the meter's LCD (see below) both confirms that logging is taking place (if the top bar is flashing) as well as how much memory remains available to store more data. After logging has stopped (see next section), the presence of bars on the bar graph can serve as a reminder to download stored data logs to your PC and save them there, freeing up the meter's memory for the next logging session.

If you have used Key Start or Rollover data logging mode, once you have downloaded and saved data logs to your PC you need not reconfigure the VOC08 to start another logging session; all you need do is press and hold the **BKLT** button. Remember to download the data from the previous logging session before starting a new session.



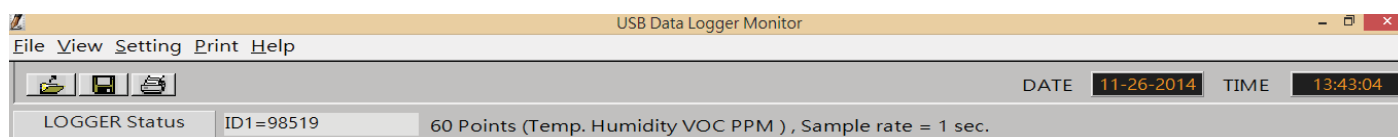
If you have chosen Real-time start mode, the bottom section of the data logging program will appear different than in other start modes. While the meter is recording, a green fan icon at the left edge will flash, and the **DOWNLOAD** button that normally appears at the right edge will be re-labeled **STOP**.



## Downloading, Viewing and Analyzing the Data

To stop data logging in Real-time start mode, press the virtual **STOP** button on the data logging program. In Schedule mode, logging will stop at the programmed date/time. In Key Start mode, you stop data logging by pressing and holding the **BKLT** button on the meter for at least two seconds. In Rollover Mode, the **BKLT** button cannot be used to stop recording, but it can be used to start a new logging session. To stop recording in Immediate or Rollover mode, press the virtual **DOWNLOAD** button on the data logging software.

Once logging has begun and immediately after it stops, you can view metadata about the logging session (how many points of which parameter(s) were captured at a particular sampling rate) on the **LOGGER Status** bar near the top of the program.



As noted above, in all modes except Real-time you must take a separate step to download logs saved in the meter to your PC. Pressing the virtual **Download** button stops recording in all modes. If you exit the program before saved logs have been downloaded, the logs will be erased from the meter's memory. In Key Start and Rollover modes, saved data must be downloaded before another logging session can be initiated.

The progress of the downloading process is shown on the blue Alert bar at the bottom of the program. It's important to mention that downloading data to a PC is not the same as saving it there. A message on the Alert bar such as "Reminder: Data is not stored!" should prompt you to manually save downloaded data by left-clicking the **File** pulldown at the upper left of the program, navigating down to the **Save File** line, and left-clicking again. This will save the data logs as an ASCII file in .csv format in any directory (folder) of your computer that you choose. The message "Save file completed" on the Alert bar will confirm the transfer.

Once a file has been saved, you can use various tools of the data logging program to view, manipulate, modify or print its content. Among the most useful of these tools are the Data Table line under the **View** pulldown and three graph manipulation tools. Clicking on **View Data Table** converts a data log graph to a table that may allow easier viewing of individual date/time-stamped readings.

The three graph manipulation tools allow you to use your computer keyboard to zoom in and out on a section of a data log plot, move the plot left or right to focus on a particular time period, and present a set of readings taken at a particular time

on the three colored windows (for Temp, Humidity and VOC) above the Alert bar. In the explanatory schematic shown at right, the dark quarter-circles within the ovals labeled **Mouse** represent the mouse's left and right buttons.

No.	Date	Time	Temp.	Humidity	VOC
1	12-12-2014	16:01:23	73.8	43.8	0.00
2	12-12-2014	16:01:24	73.8	43.8	0.00
3	12-12-2014	16:01:25	73.8	43.8	0.00
4	12-12-2014	16:01:26	73.8	43.8	0.00
5	12-12-2014	16:01:27	73.8	43.8	0.00
6	12-12-2014	16:01:28	73.8	43.8	0.00
7	12-12-2014	16:01:29	73.8	43.9	0.00
8	12-12-2014	16:01:30	73.8	43.9	0.00
9	12-12-2014	16:01:31	73.8	43.9	0.00
10	12-12-2014	16:01:32	73.8	43.9	0.00

Hold **Ctrl** + Click = Screen graph zoom in

Hold **Ctrl** + Click = Screen graph zoom out

Hold **Ctrl** + **Shift** Click = Move screen graph

Press or = Read each measurement .



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**VOC08 Software Manual**

**Specifications subject to change without notice**

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**Software MAN# VOC08**

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