Datalogger Graph Software Help

Version 1.2, March 9, 2007

For additional information refer to the user guide included on the supplied program disk.

CONTENTS

QUICK START GUIDE

1. Remove the semi-transparent cap from the Datalogger.
2. Install the battery in the Datalogger. If battery has been installed, you'd better make sure the battery in the Datalogger is sufficient to finish your task. For more details, see USER'S GUIDE.
3. Insert the Datalogger into a free USB port on your computer. The computer will automatically detect the presence of the Datalogger and start the hardware installation process.
4. Double-click the Datalogger icon on your desktop to launch the graph software. You will see the Main Screen.
5. Set up and start the Data Logger and follow the setup procedure:
   -Select the Start Mode
   -Enter the Logger Name
   -Select the Sample Point
   -Select the LED Flash Cycle
   -Confirm whether LEDs flash when the logging exceed the configured alarm level.
   -Select the Unit for Temperature.
   -Enter Low Alarm and High Alarm for Temperature and Relative Humidity.
   -Then click the Setup button
6. The summary screen will appear.
7. Remove the Logger from the computer and place it in the location where you want to measure temperature.

Notes: When the Logger is connected to the USB port, the battery inside the Data Logger is discharged at a higher rate than normal. To conserve battery life, do not leave the Logger connected to the USB port for a prolonged period of time.
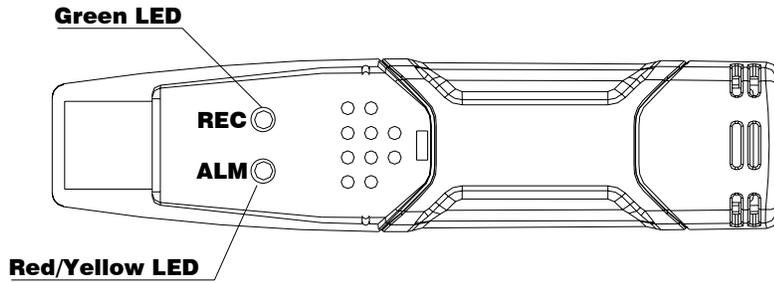
INSTALLING GRAPH SOFTWARE

1. Start Windows
2. Insert the CD into the CD-drive of your computer.
3. Run SETUP.EXE installation program on the CD, install it to the referred file directory.
4. The datalogger icon will be built on your desktop.

INSTALLING USB DRIVER

1. Insert the datalogger into a USB port on the computer.
2. Then the Windows system will show finding a new hardware.
3. Ensure the CD is in the CD-drive.
4. Choose specific directory to the CD in the CD-Drive.
5. The Windows system will start copying USB driver to your computer.

LED STATUS GUIDE

Green LED

REC ○

ALM ○

Red/Yellow LED

LED Status	Indication	Action
REC ALM ○ ○	**Both LED lights OFF** *Logging not active* **Or** *Low Battery*	**Start logging** **Replace battery and download the data**
REC ALM ● (green) ○	**One green flash every 10 sec. *** *Logging active, no alarm condition*** **Green double flash every 10 sec.** *Delayed start*	**To start, hold the start button until Green and Yellow LED flash**
REC ALM ○ ● (red)	**Red single flash every 10 sec. *** *Logging active, low alarm condition for RH**** **Red double flash every 10 sec. *** *Logging active, high alarm condition for RH**** **Red single flash every 60 sec.** *Low Battery*****	**If logging, logger will stop automatically. No data will be lost. Replace battery**
REC ALM ○ ● (yellow)	**Yellow single flash every 10 sec. *** *Logging active, low alarm condition for TEMP**** **Yellow double flash every 10 sec. *** *Logging active, high alarm condition for TEMP**** **Yellow single flash every 60 sec.** *Logger memory full*	**Download the data**

* To save power, the logger's LED flashing-cycle can be changed to 20s or 30s via the supplied software.

** To save power, alarm LEDs for temperature and humidity can be disabled via the supplied software.

***When both temperature and relative humidity readings exceed alarm level synchronously, LED status indication alternate every cycle.

****When the battery is low, all operations will be disabled automatically. NOTE: Logging automatically stops when the battery weakens (logged data will be retained). The supplied software is required to restart logging and to download logged data.

MENU BAR

From left to right the menu bar icons represent DATA DOWNLOAD, LOGGER SETUP, FILE OPEN, FILE SAVE-AS, FILE PRINT, VIEW ALL, and ZOOM. In addition, the FILE, VIEW, LINK, and HELP pull-down menus are available here. All will be discussed in the following paragraphs. Start by setting up the Logger as explained in the following section.

SETUP THE LOGGER

Click on the computer icon on the menu bar (2nd from left) or select LOGGER SET from the LINK pull-down menu. The Setup window will appear as shown below; descriptions for each field in the Setup window are listed directly below the illustration:

- The CURRENT TIME field will automatically synchronize with the PC date and time setting

- The MANUAL and INSTANT select buttons allow the user to start datalogging immediately when the Setup window is exited (INSTANT) or at a later time (MANUAL). Explained in the LOGGING READINGS section

- The LOGGER NAME field allows the user to select a unique name for the logger

- The SAMPLE POINTS field instructs the logger to take a finite number of readings

- The SAMPLE RATE pull-down menu instructs the logger to log readings at a specific rate

- The LED Flash Cycle can be set by the user (the longer the time, the longer the battery life)

- The ALARM SETTINGS portion of the SETUP window allows the user to set HIGH and LOW temperature/RH limits and disable the flashing of the Logger's LEDs thereby conserving battery energy

Click on the SETUP button to save changes. Press the DEFAULT button to set the Logger to factory default condition. Press the CANCEL button to abort the setup.

Notes: Any stored data will be permanently erased when Setup is finished. To enable you to save this data before it is lost, click Cancel and then you need to download data.

The battery will in all likelihood run out before logger will have finished specified sample points. Always ensure that the remaining charge in the battery is sufficient to last the complete duration of your logging exercise. If in doubt,

we recommend that you always install a fresh battery before logging critical data.

LOGGING READINGS

If INSTANT was selected in the SETUP window, the Logger begins logging at the instant the SETUP button is pressed. If MANUAL was selected, the Logger must be manually started by pressing and holding the Logger's yellow button for approx. 3 seconds or until the two LEDs on the Logger flash at the same time.

Logging will continue at the programmed sample rate until the number of readings (sample points) specified in the Setup window is reached.

The green LED flashes once per sample point and the red or yellow LED flashes when user programmed alarm limits are exceeded. For details, see LED status guide.

DOWNLOAD SAVED DATA TO PC

To transfer the readings stored in the Logger to the PC:

1. Connect the Logger to the same USB port used when the Logger was initialized

2. Open the Datalogger software program if it is not still running

3. Click the Download icon (1st on the left) or select Data Download from the LINK pull-down menu

4. The Window shown below will appear. Press DOWNLOAD to begin transferring readings
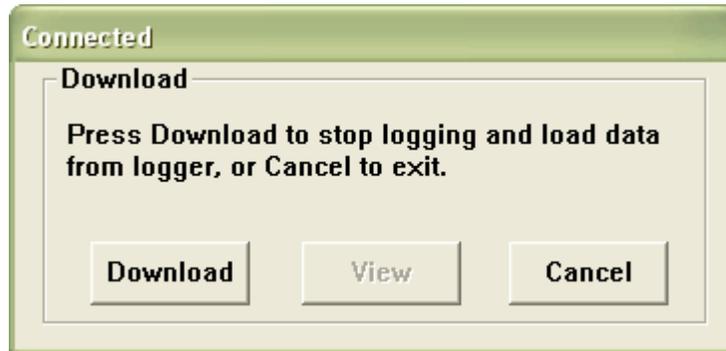
If readings are successfully transferred, the VIEW screen and the SAVE screen (both shown below) will appear. In the SAVE screen, name the file and save it to a convenient location. At a later time, the user can select SAVE-AS and save the data as an Excel, Text, or Bitmap file (explained in next section), however, the data in this case is saved as an .rec file for use in this program only.
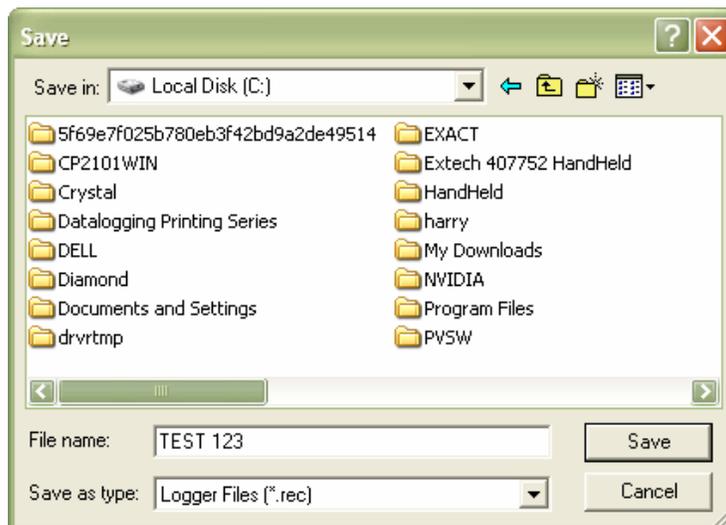

In the VIEW screen (below) press VIEW to see the data graphically. If there are no readings currently stored in the Logger, the program will let the user know via warning screen.
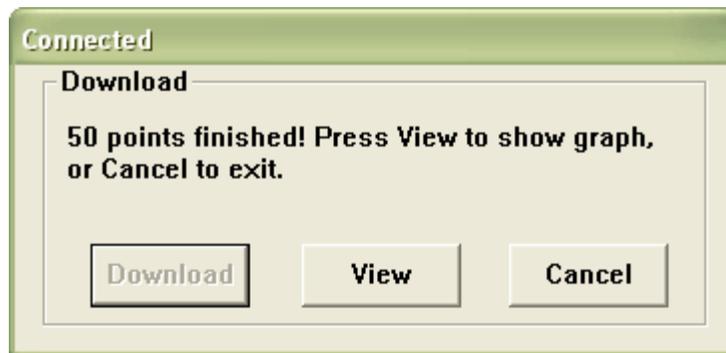
When VIEW is pressed, the Data Graph window appears (pictured and discussed in the next section)

DATA GRAPH

The Data Graph window presents the transferred data in x-y graph format with Date/Time represented on the horizontal axis and Temperature / %Relative Humidity / Dew Point / Alarm Limits represented on the y axis:
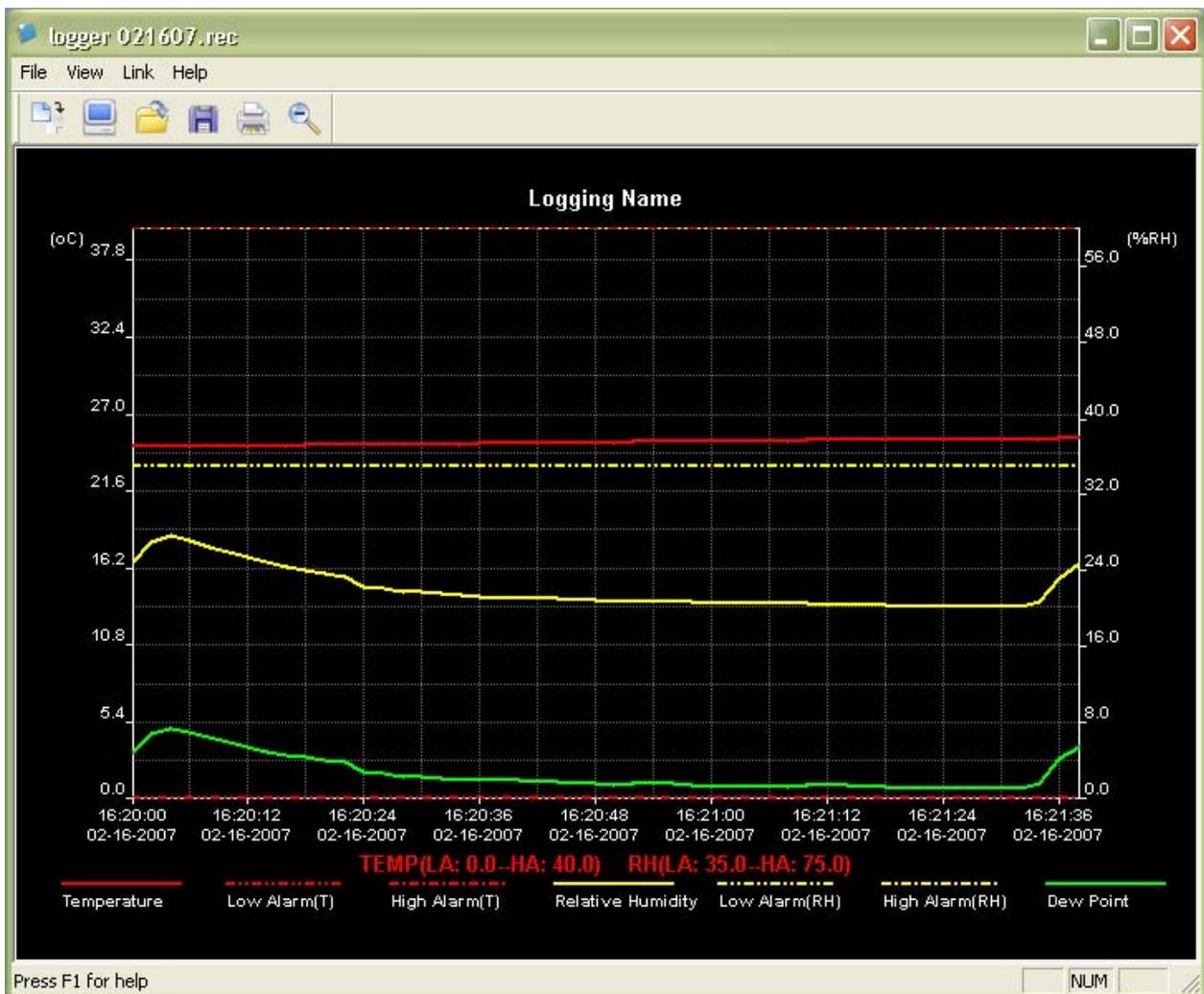
To zoom in and zoom out data regions, there are several approaches, these are:

1. Use the mouse to click and drag a box around any data area to magnify the area selected.

2. Click on the zoom magnifier icon tool on the menu bar

3. Select VIEW ALL or ZOOM OUT from the VIEW pull-down menu.

In the example graph above, the Temperature is represented by the solid red line (the lines are known as 'traces'), the Relative Humidity % by the solid yellow trace, and the Dew Point Temperature by the solid green trace. The low and high alarm values for temperature are represented by the dashed red trace, the low and high alarm values for Relative Humidity by the dashed yellow trace.

To customize the graph window select SHOW TRACES, BACKGROUND, GRID LINES, and MASK POINTS from the VIEW pull-down menu. These options provide the following features:

SHOW TRACES: Allows the user to select which data to view as a trace (Temperature, RH, Dew Point, & Alarms).

BACKGROUND: Select background color scheme.

GRID LINES: Add or remove grid lines from x and y axes.

MASK POINTS: Places dots on the traces for the actual data points, breaking up the continuous nature of a trace.

Notes: The horizontal grid line will be aligned to specific values on the temperature axis, while any alignment with specific values on the relative humidity axis is merely coincidental.

SAVE AND OPEN DATA FILES

To save the transferred data in a format other than the proprietary .rec format, click the SAVE AS icon from the menu bar (4th from right) or select SAVE AS from the FILE pull-down menu. The data can be saved in the following formats:

TEXT FILE (.txt)

EXCEL FILE (.xls)

BITMAP FILE (.bmp)

To open an existing data file for viewing on the data graph window, click on the FILE OPEN icon on the menu bar (3rd from left) or select FILE OPEN from the FILE pull-down menu. When prompted, select a .rec file saved earlier.

PRINT DATA GRAPH

To print a data graph window to a line or network printer, click on the printer icon or select PRINT from the FILE pull-down menu. Note that color graph windows can be accurately printed on color printers.

CLEAR LOGGER DATA

The Logger retains data in its internal memory until the user begins a new logging session. Starting a new logging session clears all of the logger's stored readings; be sure to save data before starting a new logging session.