



SOFTWARE HELP GUIDE

HD450 Datalogging Light Meter



Software Introduction

This program can collect data from the HD450 when the meter is connected to a PC and also download stored data from the meter's memory. The data may be displayed graphically or as text.

The maximum number of Real-Time data points is 10,000 and on-board datalogging memory can record 16,000 data points.

System Requirement:

Operating System: Windows 7, Windows 8.1, Windows 10

Minimum hardware requirements:

- PC with Pentium 90MHz or higher
- 32 MB RAM
- At least 5 MB byte hard disk space for the supplied software
- Display resolution of at least 800 x 600 with High Color (16 bit)

Software Installation:

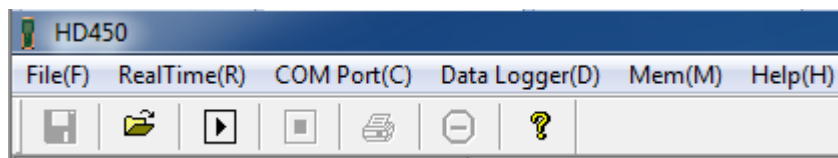
Insert CD into PC or download the software from Extech.com.
If Autorun does not execute run the ExtechInstaller from the root folder.



Click on the **Software** button to install the HD450 software. (Select default values)
Click on the **Drivers** button to install the USB driver. (Select default values)



Main Menu



Save - Save the recorded real time data



Open - Open a saved file



Real Time Data Run - Begin collecting real time data



Stop - Stop collecting real time data



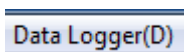
Print- Print the real time graph



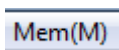
Undo Zoom from graph display



Help document and Help About (Software revision)



Download datalogger memory from the meter



Download 99 point memory data from the meter

OPERATION

Initiating Communication

Turn the HD450 Light Meter ON and then connect it to the PC USB port.

Run the HD450 software program.

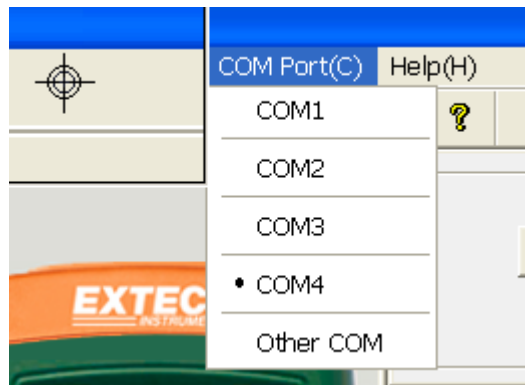
Click on the COM Port menu item and choose the COM port that the meter is connected to. When communication is established, the meter's display and the virtual meter display (software window) will indicate the same value.



If communication is unsuccessful the virtual meter will display "OFFLINE".



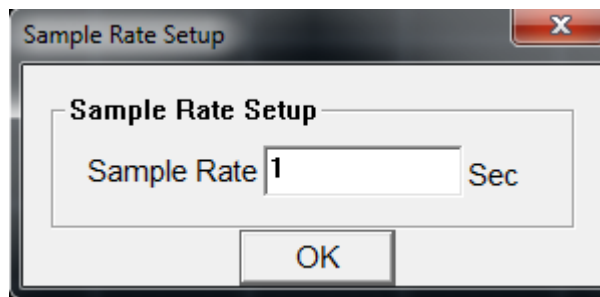
If communication fails, open the Windows Device Manager and examine PORTS. Locate the Silicon Labs driver entry and note the COM port number. Enter this number into the HD450 software.



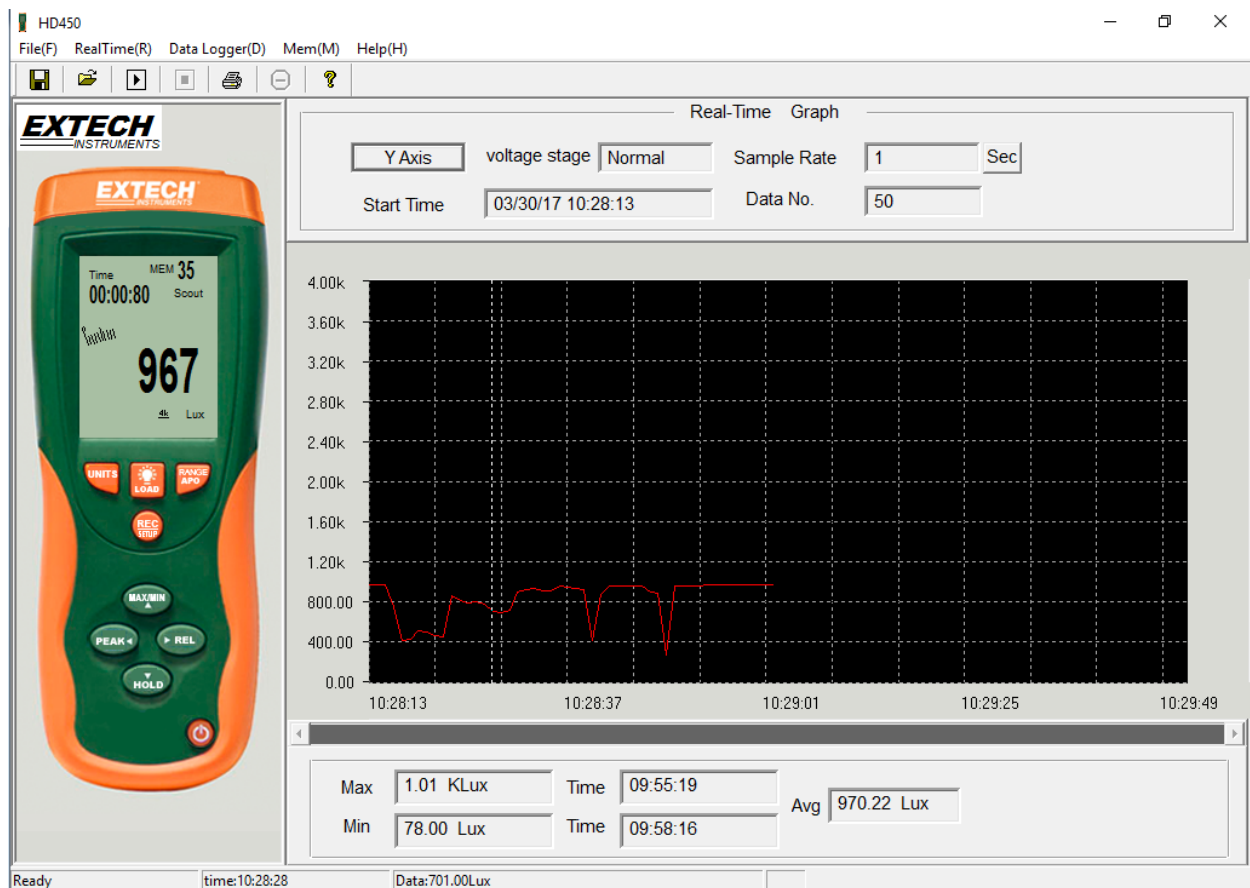
Recording Real-Time Data



Click on Start button to start recording in Real Time mode.
The Sample Rate dialog box will appear.



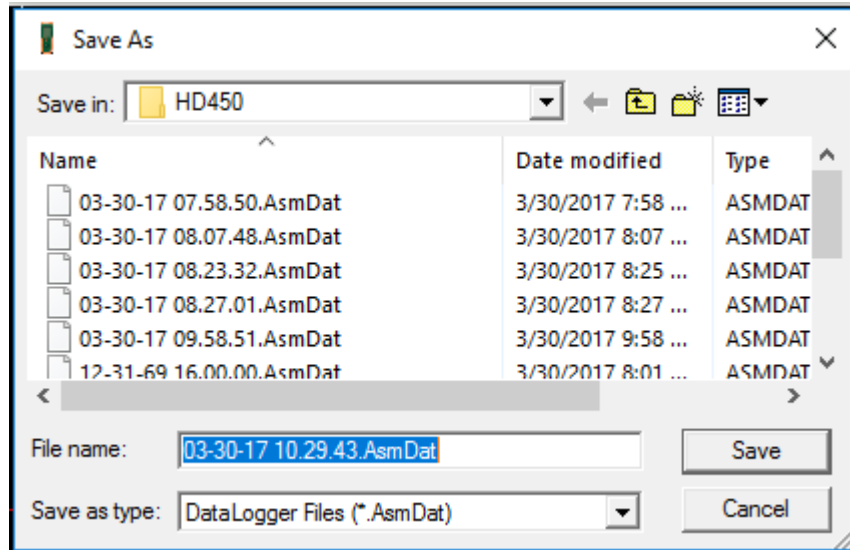
Enter a number (1 or greater) to set the sample rate and then click “OK”.
The data will begin plotting on the Real Time Graph.



To Stop the Real Time data routine, click



Click on the Save icon  to save the Real-Time data to your PC.



Datalogger and Manual Memory Data Download

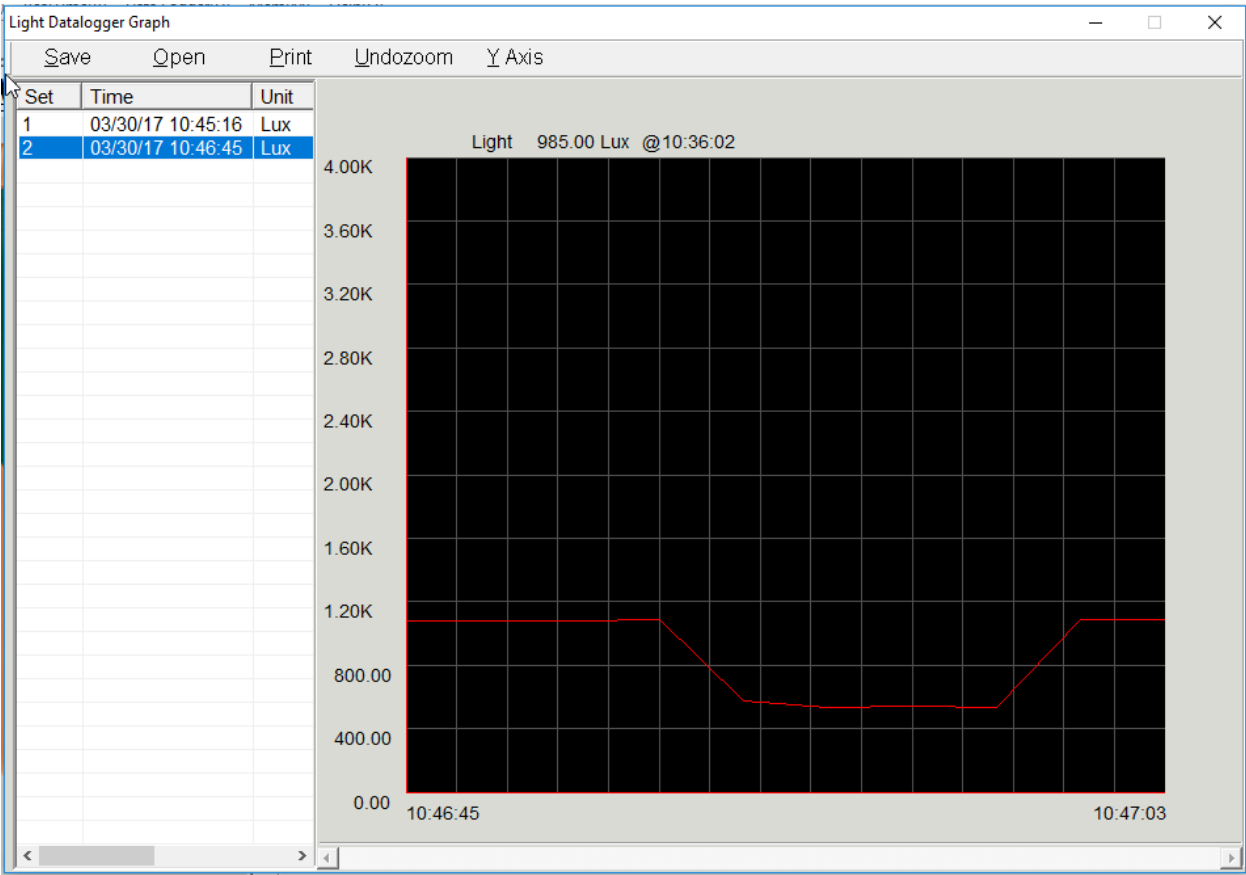
Datalogger Memory download

Click “Data Logger(D)” to download the Automatically stored Datalogging memory from the meter



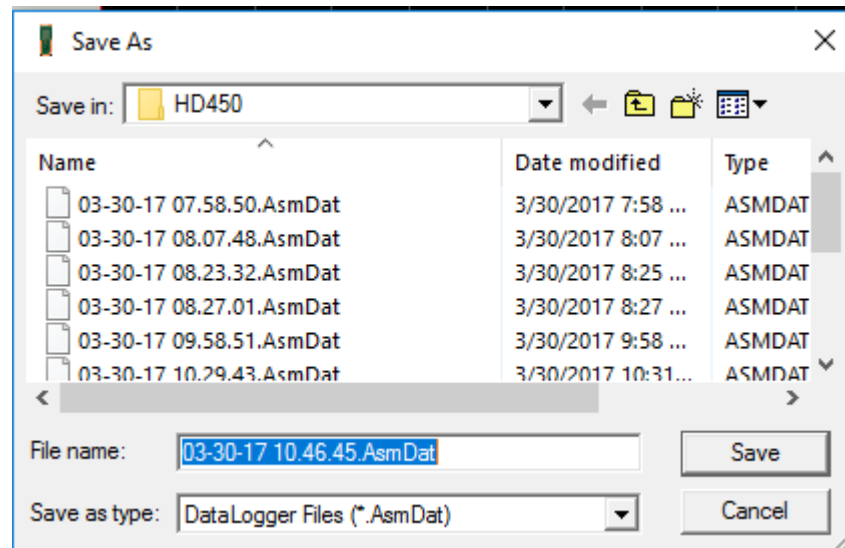
After the data is transferred to the PC, the list page opens. The left column shows how many data Sets were loaded and detailed information for each data set (Date, Time, Unit, Sampling Rate and Record Number),

Double click any of the numbers in the **Set** column to view the data on the graph for that Set.



The opened graph window supports: Saving Files, Printing, Zooming, Y Axis Adjustments and Cursor data point selection.

Click on the **SAVE** menu item and choose SAVE AS. Create a file name or choose the default Date and Time filename.



The file will be saved with the “*.AsmDat” extension to be reopened in the HD400 program and also as a “.TXT” file (CSV format) to be opened in a word processing or spreadsheet program.

Manually Recorded Memory Data Download

Click “**Mem (M)**” to download the manually recorded Memory data




The downloaded memory data will appear in a list box.

The opened Data List window supports: Saving files, Opening Files and Printing the Data List.

Light Data List				
NO.	DATA	UNIT	STATUS	TIME
1	0.40	Lux	General	03/30/17 10:44:56
2	1.08K	Lux	General	03/30/17 10:45:05
3	1.08K	Lux	General	03/30/17 10:45:06
4	1.07K	Lux	General	03/30/17 10:45:07
5	1.07K	Lux	General	03/30/17 10:45:08
6	371.00	Lux	General	03/30/17 10:45:08
7	377.00	Lux	General	03/30/17 10:45:09
8	375.00	Lux	General	03/30/17 10:45:10
9	364.00	Lux	General	03/30/17 10:45:10
10	540.00	Lux	General	03/30/17 10:45:11
11	1.08K	Lux	General	03/30/17 10:45:12
12	1.09K	Lux	General	03/30/17 10:45:40

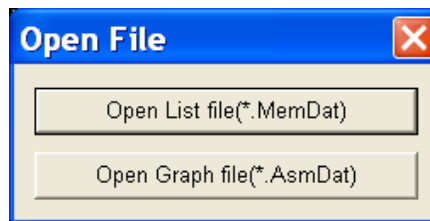
Opening a Saved Data File

Opening a Saved Data List file (MemDat)


Click the  icon on the Main window and chose to open the saved data file in either a List file or a “Graph” format.

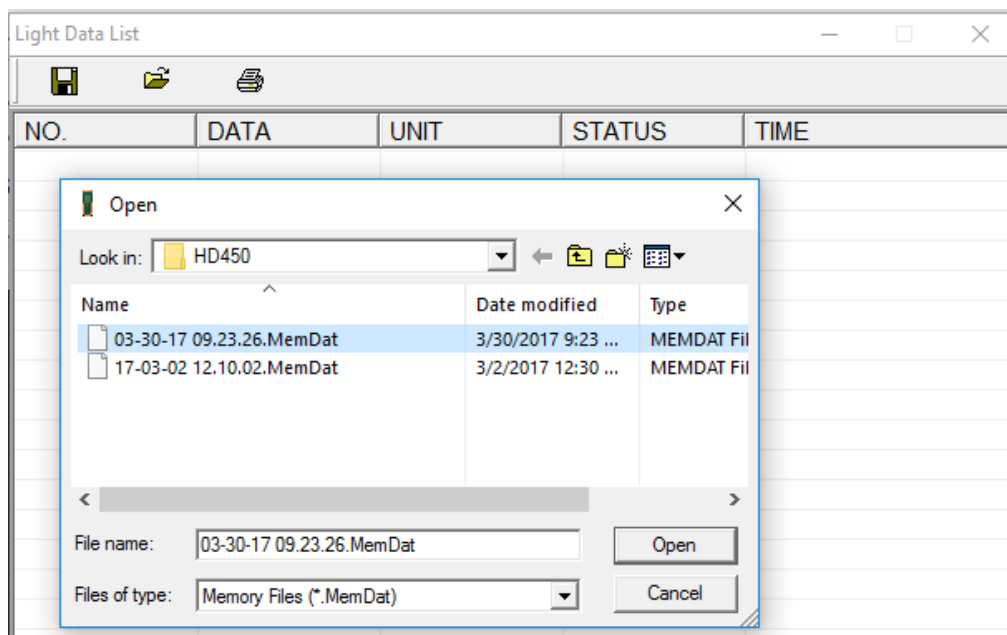
MemDat files – Manually logged data in a Data List format.

AsmDat files -- Auto logged data or Real-Time data recordings in a Graph format.



Click “Open List File” to open the *.MemDat file (downloaded Manually recorded memory data) as a Data List.

Click the  icon to open the “Open” dialog box and then select a *.MemDat file. The selected file will open in a List format.




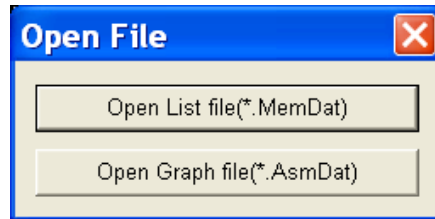
Light Data List				
NO.	DATA	UNIT	STATUS	TIME
1	1.00K	Lux	General	03/30/17 08:18:13
2	1.00K	Lux	General	03/30/17 08:18:16
3	76.00	Lux	General	03/30/17 08:18:18
4	273.00	Lux	General	03/30/17 08:18:23
5	271.00	Lux	General	03/30/17 08:18:25
6	539.00	Lux	General	03/30/17 08:18:27
7	435.00	Lux	General	03/30/17 08:18:29
8	417.00	Lux	General	03/30/17 08:18:31
9	973.00	Lux	General	03/30/17 08:18:33
10	1.00K	Lux	General	03/30/17 08:18:34
11	988.00	Lux	General	03/30/17 08:24:00
12	987.00	Lux	General	03/30/17 08:24:03
13	988.00	Lux	General	03/30/17 08:24:06
14	987.00	Lux	General	03/30/17 08:24:07
15	988.00	Lux	General	03/30/17 08:24:09
16	984.00	Lux	General	03/30/17 08:24:22
17	987.00	Lux	General	03/30/17 08:24:24
18	986.00	Lux	General	03/30/17 08:24:25
19	984.00	Lux	General	03/30/17 08:24:25
20	987.00	Lux	General	03/30/17 08:24:26
21	984.00	Lux	General	03/30/17 08:24:27
22	OL	Lux	General	01/01/00 00:01:20
23	OL	Lux	General	01/01/00 00:01:20
24	1.04K	Lux	General	01/01/00 00:01:20
25	1.04K	Lux	General	01/01/00 00:01:20
26	1.04K	Lux	General	01/01/00 00:01:20
27	1.03K	Lux	General	01/01/00 00:01:20

The left column will show how many data points were taken.

Detailed information for each data point (Data value, Unit of measure, type of data and Date and Time stamp). The opened List window supports: Saving data, Opening files and Printing the list.

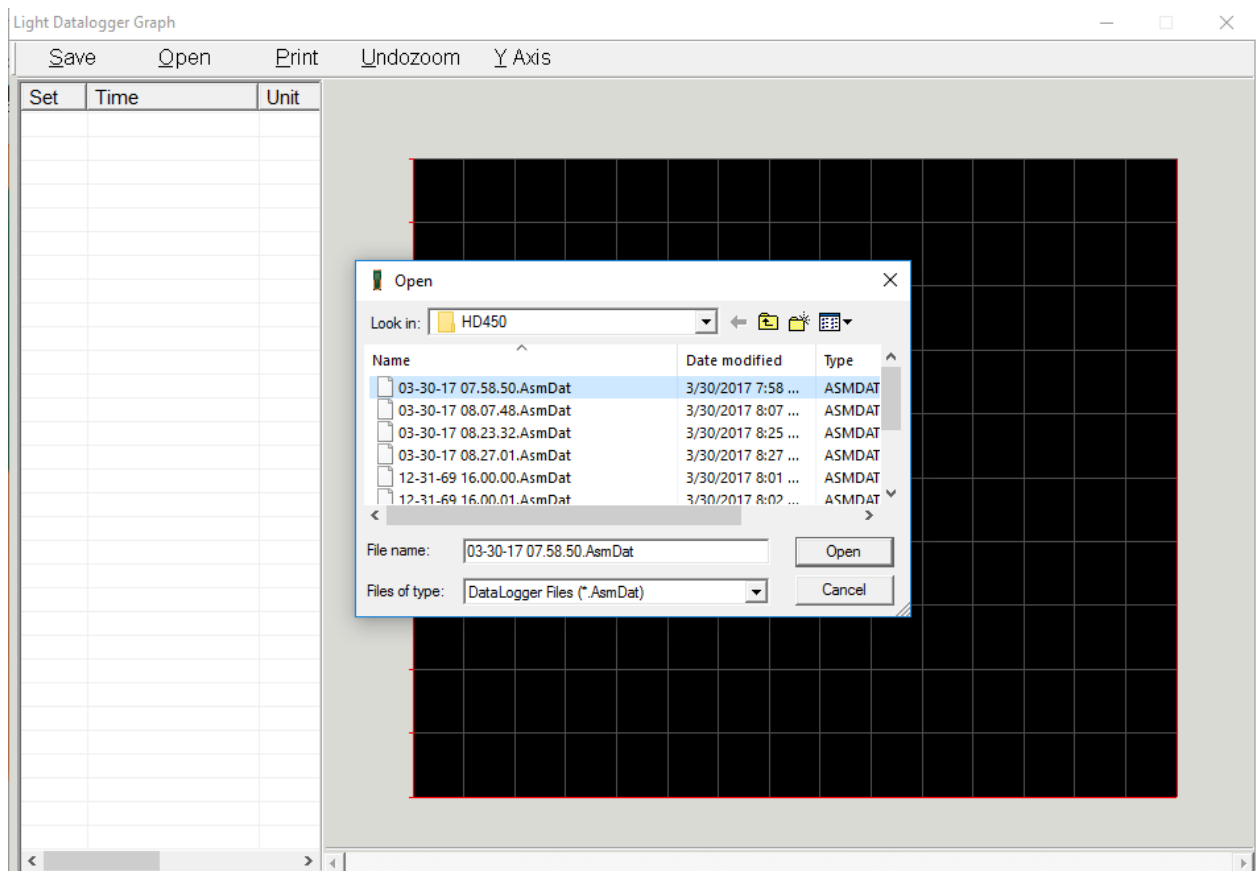
Opening a Saved Graph file (AsmDat)

Click the  icon on the Main window and chose to open the saved data file in either a List file or a Graph file.



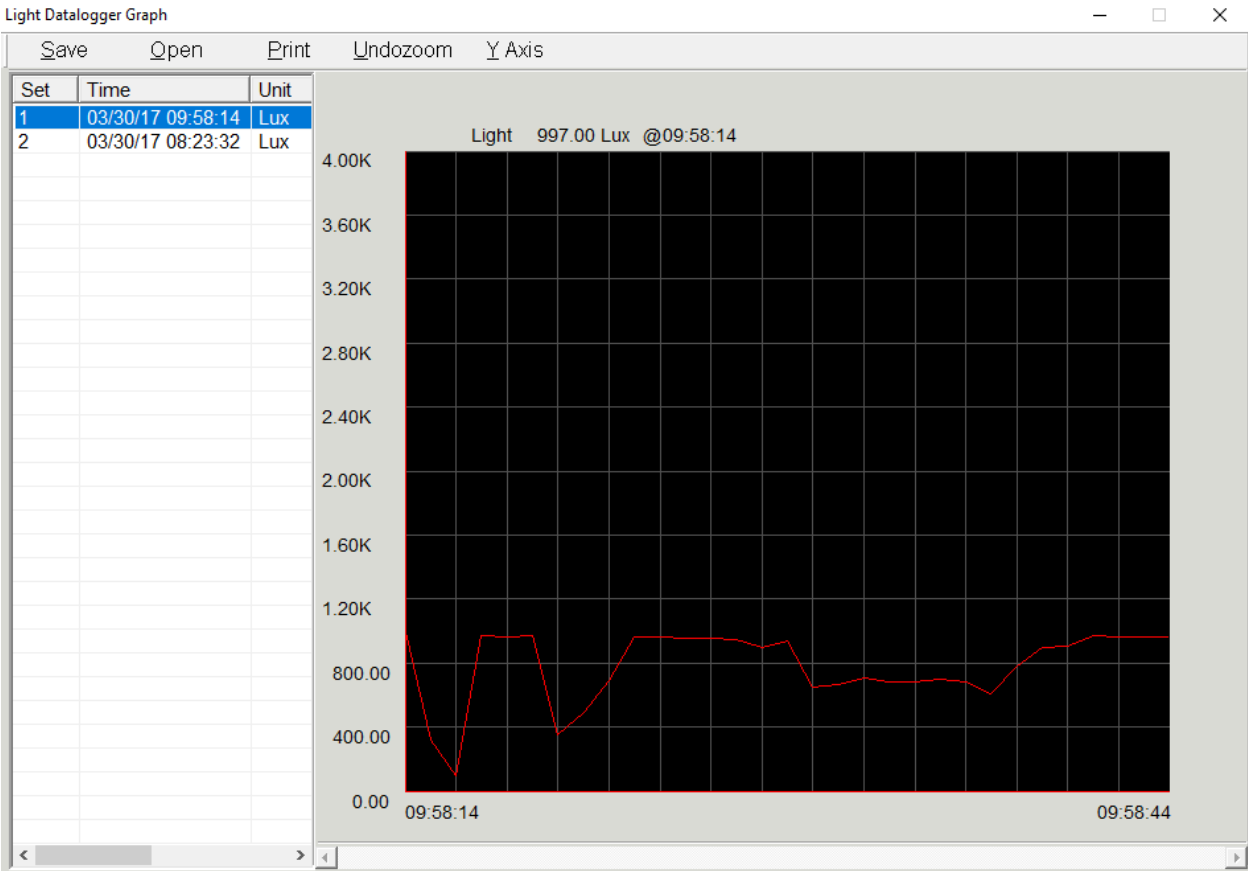
Click "Open Graph file" to open a *.AsmDat file (downloaded Automatically recorded memory data or saved Real-Time data file) as a graph.

Click the **OPEN** menu item and choose the graph file to open.



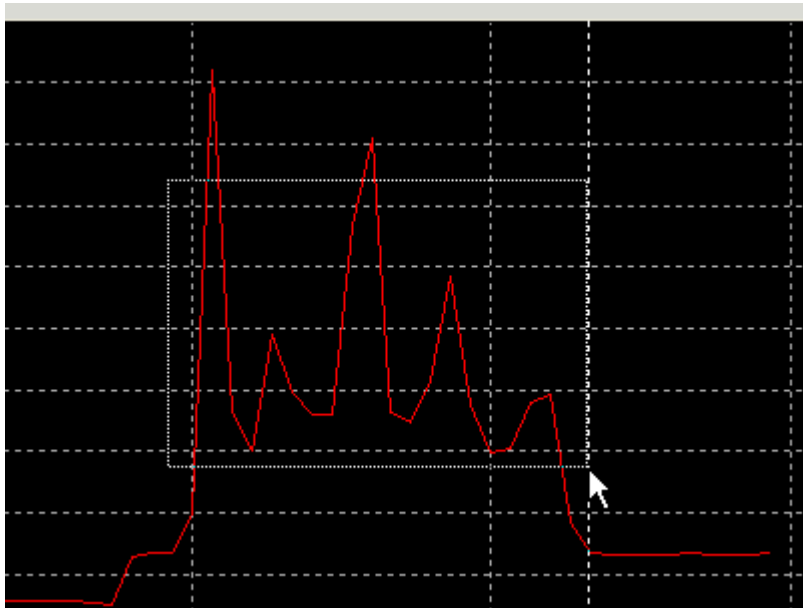
The Graph will open for view.

More data files can be selected.
Double-click on the preferred file entry to view it on the graph.




Zoom in on the Graph:

Press the left mouse button and drag a rectangle around the area to be expanded.
Release the mouse button.

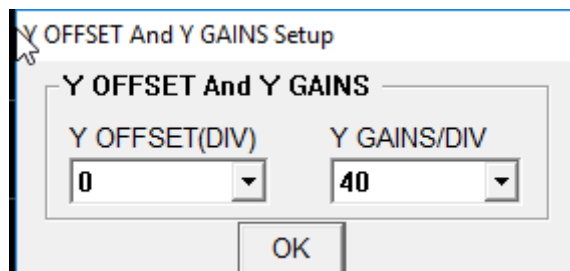


Zoom out:

Zoom out to full view by clicking  (main window) or **UNZOOM** (graph window)

Y Axis Offset and Gain:

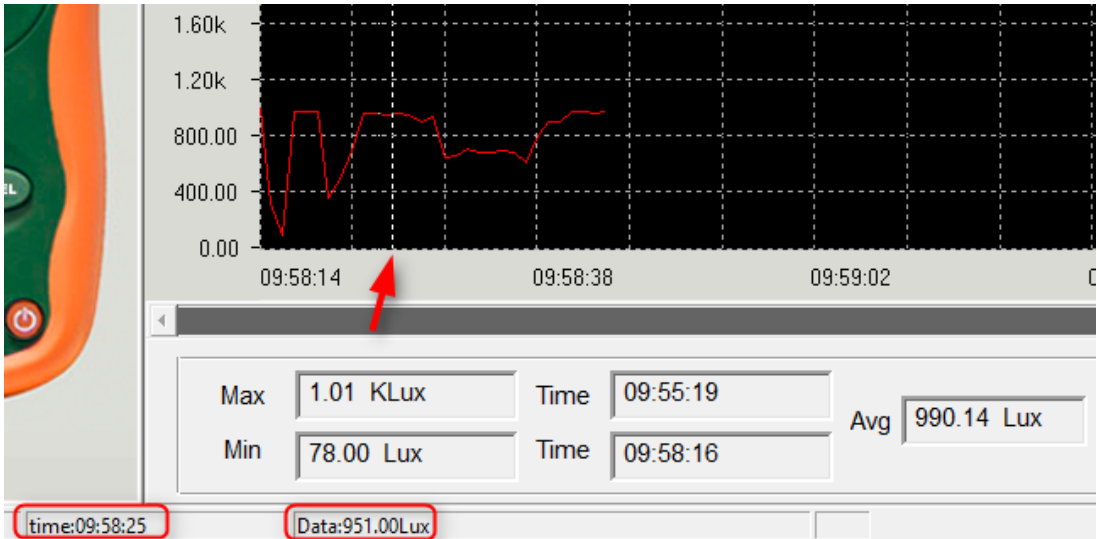
Click  to change the vertical axis Offset or Gain (units per division)



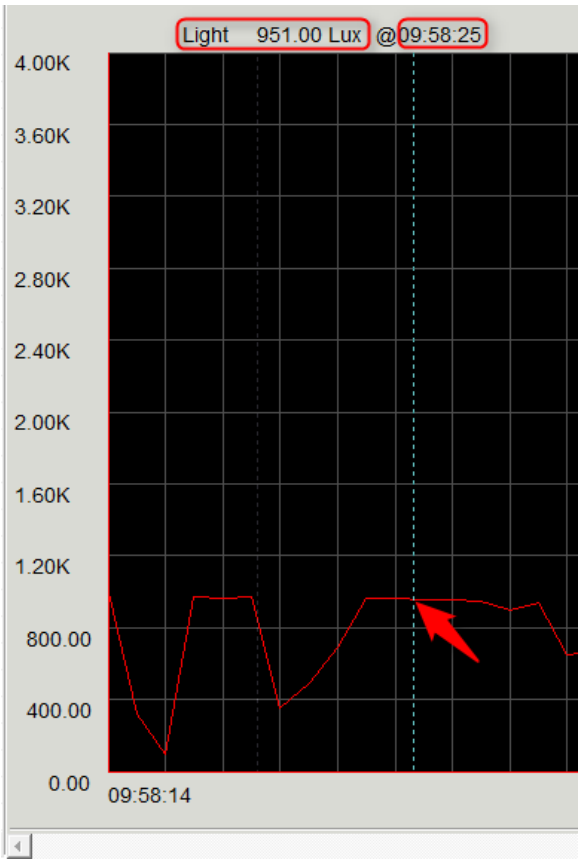
Cursor:

The vertical cursor appears on the graph at the mouse location. The **Time** the sample was taken and the **Data** value of the point highlighted on the graph, is displayed.

Main window view of cursor position data (bottom of main window)



Open **Graph window** view of cursor position data (top of graph)



Print:

You can print a graph from the Main window or the Open Graph window.

You can print a Data list from the Open MemDat window.

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