Datalogger and RS232 Interface

- RS232 Protocol 1
- Hardware Requirements and Setup 3
- Software Requirements and Setup 4
- On-Line Operation 6

A. Run the software 6

B. Record 7

C. Download Data 9

1. Download Data from Hard Disk 9
2. Download Data from EEP ROM 10

D. Data Convert 11

1. Apply for Excel 11
2. Apply for Graph 14

E. Sampling Time 17

1. PC Sampling Rate: 17
2. Meter Sampling Rate: 18
3. Meter Data Logger Interval Time 18

F. RTC (Real Time Clock) 19

G. Erase Data Logger 20

H. Reset 20

• RS232 Protocol

1. RS232 Settings :

① Baud rate : 38400bps ② Parity check : None ③ Data bits : 8 ④ Stop bit : 1

2. Recall : To receive data from the meter, input an (any key) command then it will reply

3. Transfer Format :

Content :

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6
02H	Function1 Byte	Function2 Byte	Data High Byte	Data Low Byte	03H

Function1 :

Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Over	x				011→50~110 100→40~100 101→30~ 90	000→80~140 001→70~130 010→60~120	

Function2 :

Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Under	00→A 01→C 10→Z 11→AA		Stop	Pause	Play	00→Fast 01→Slow 10→Impulse 11→ x	

x : don't care

4. Command :

"B" + SS + NN + HH + DD + MM + YY → Set Real Time Clock

"C" + Interval High Byte + Interval Low Byte → Set Interval

"D" → Fast / Slow / Impulse

"E" → Level up

"F" → Level down

"G" → A / C / Z / 20-200Hz Filter

"H" → Clear Data Logger

“I” → SS + NN + HH + DD + MM + YY

“J” → Interval High Byte + Interval Low Byte

“M” → Response 1353S

“N” → Response record items

1 Byte	4 Byte	4 Byte	2 Byte	10 Byte…	1 Byte
02H	SD card capacity	SD card free space	record items	Record information*	03H

Record information

2 Byte	4 Byte	2 Byte	2 Byte
File name	File size	Last modified date	Last modified time

“O”+ File name 2byte → Response data logger → ASCII

“P” + File name 2byte → Delete single data

• Hardware Requirements and Setup

PC Hard Ware Requirements :

HDD, CD Rom, 486 PC or above, with available USB port

EGA or higher monitor

4M bytes or more memory size

PC Hard Ware Setup :

Connect the Meter with PC by USB cable

• Software Requirements and Setup

1 Start up windows XP / 7 / 8 / 10 operating system

2 Close all other applications

3 Insert the disk in CD drive

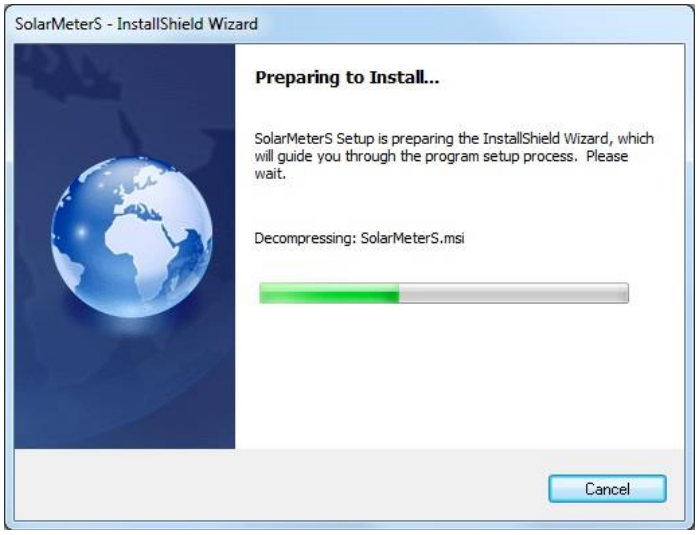
Follow the on-screen instructions to set up USB driver.

To install meter software, click . 

(if autorun does not start, open the CD drive then execute “setup.exe”)

Follow the on-screen instructions.

1).



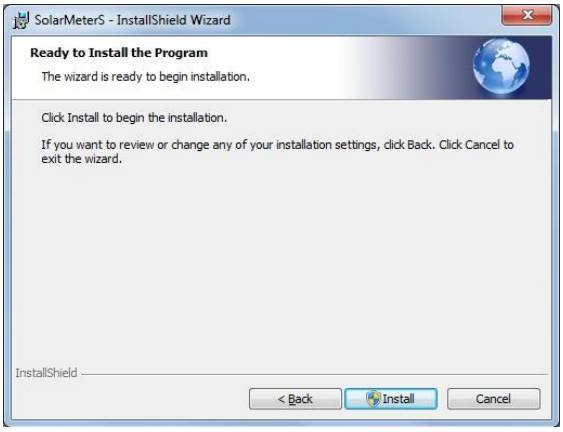
Setup will run automatically.

2).



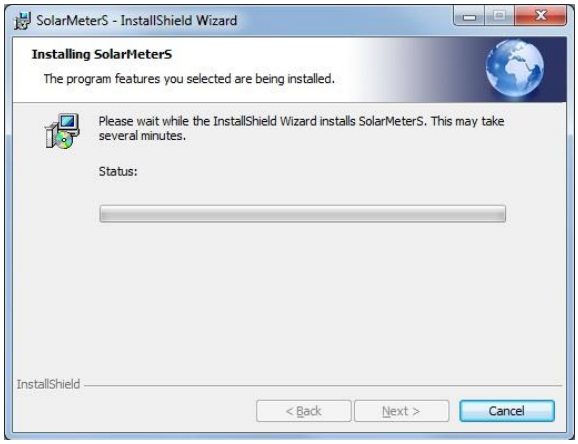
Click Next> button

3).



a. Click **Install** button

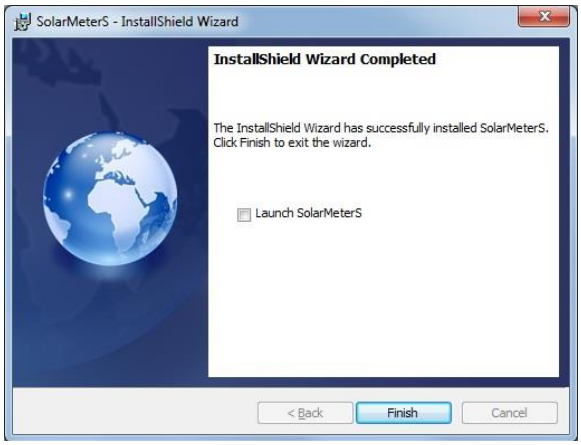
4).



If there shows a “User Account Control” window that asks “Do you want to allow the following program from an unknown publisher to make changes to this computer?”

Click **Yes** button

5).



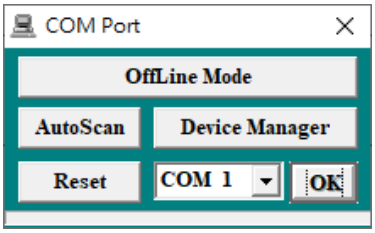
Click **Finish** button to complete.

• On-Line Operation

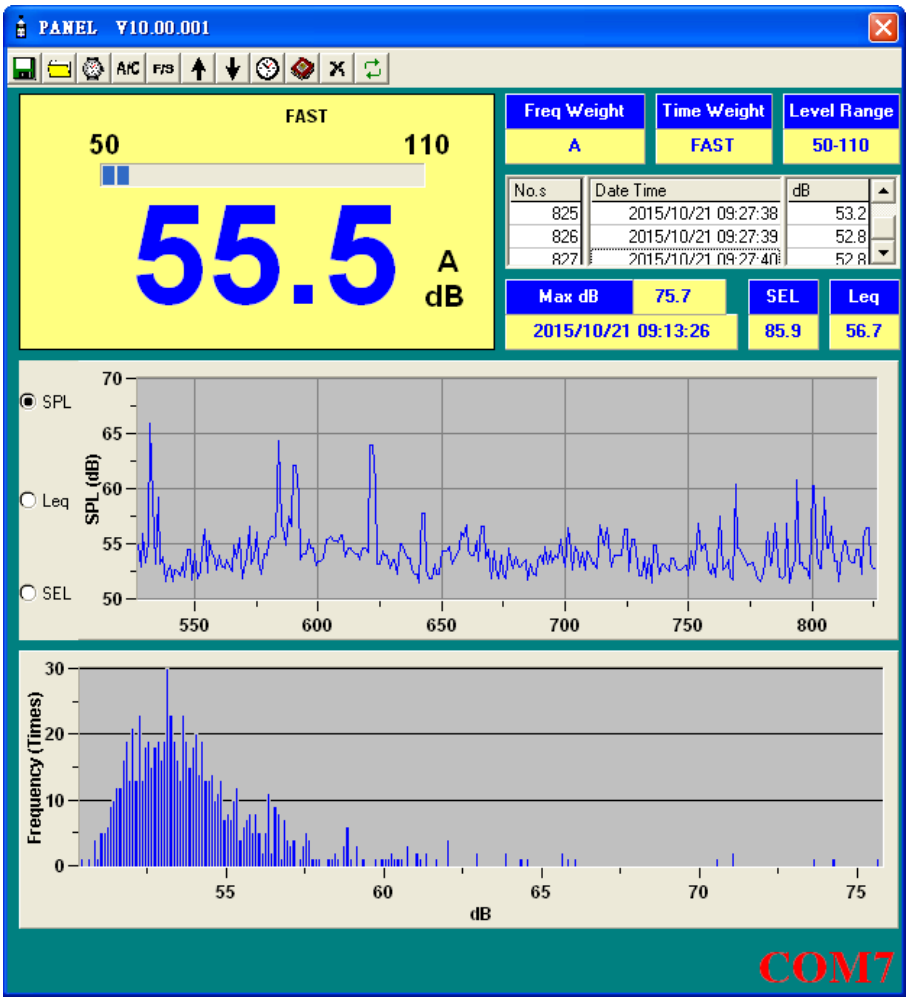
A. Run the software

1. Click 

icon.
2. Click an available COM port



3. Main software screen

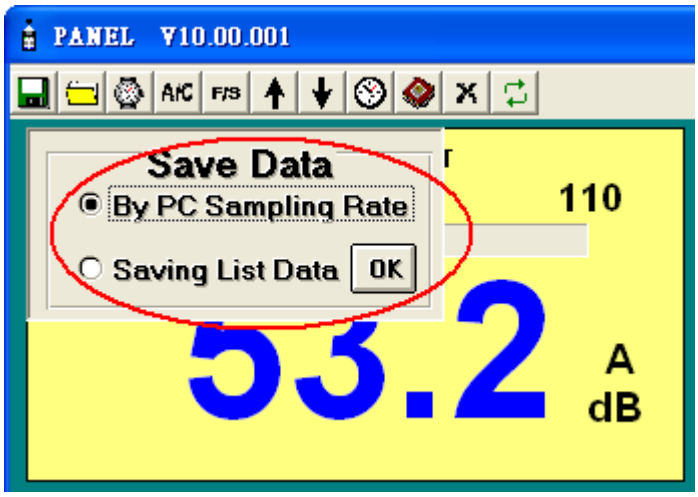


B. Record

Save to Hard Disk (PC)

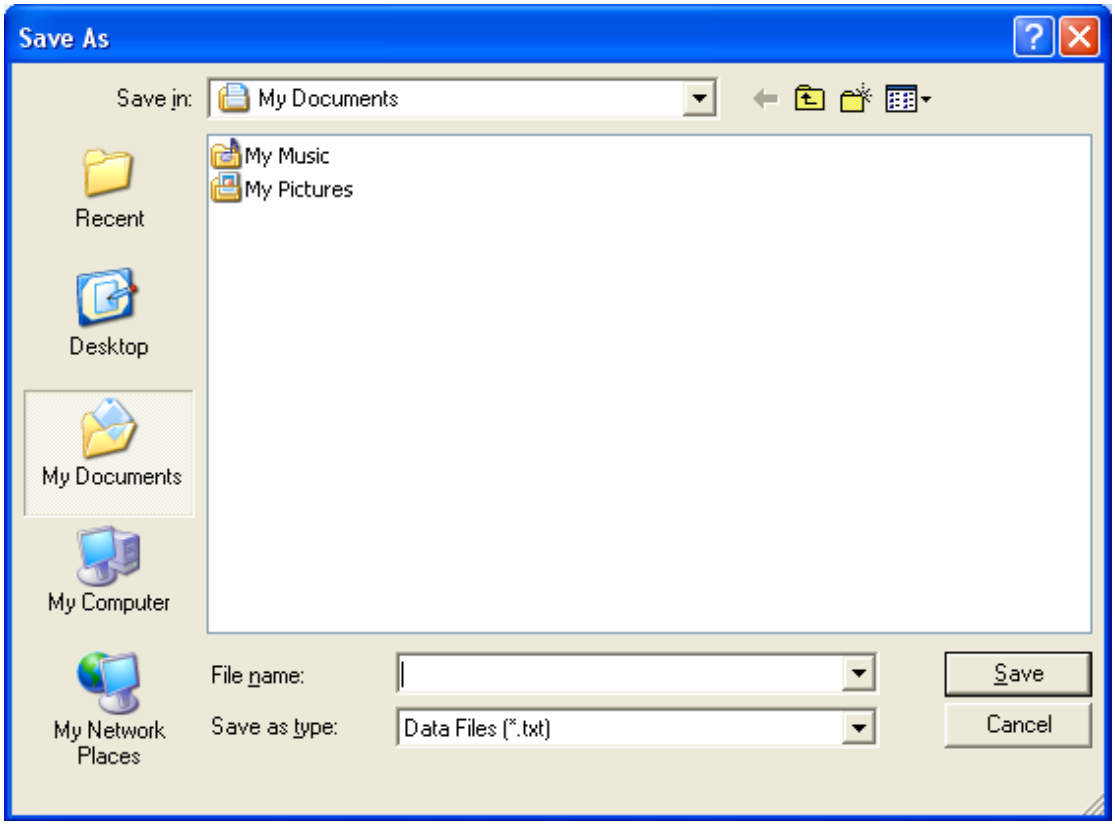
By PC Sampling Rate

Click  button.

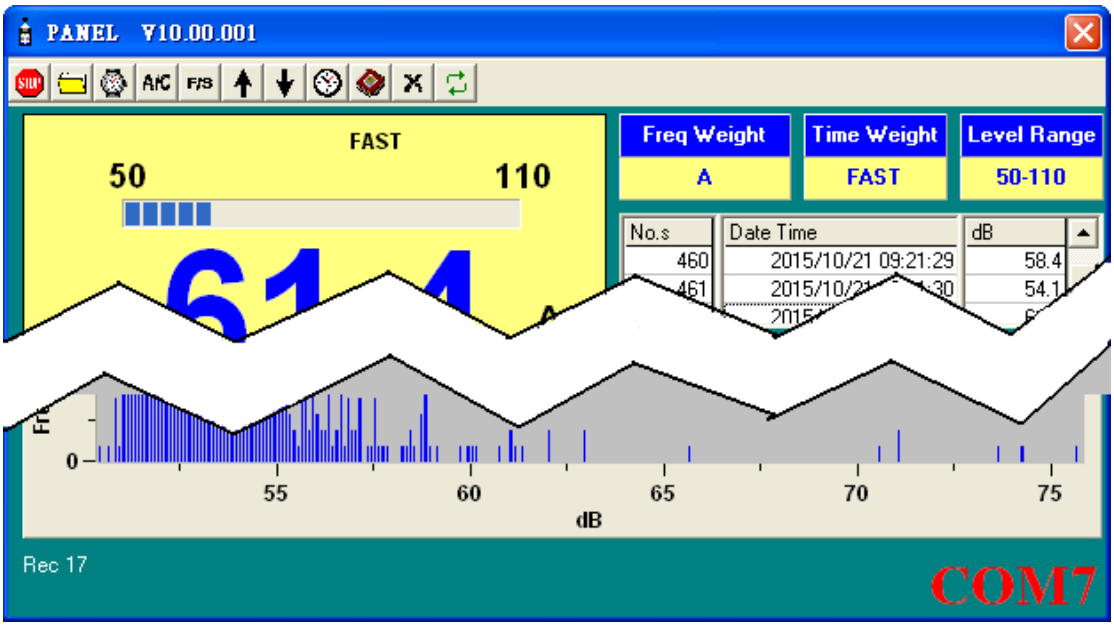


Select “By PC Sampling Rate” and then click “OK” to confirm.

The dialog box shown below, will appear.



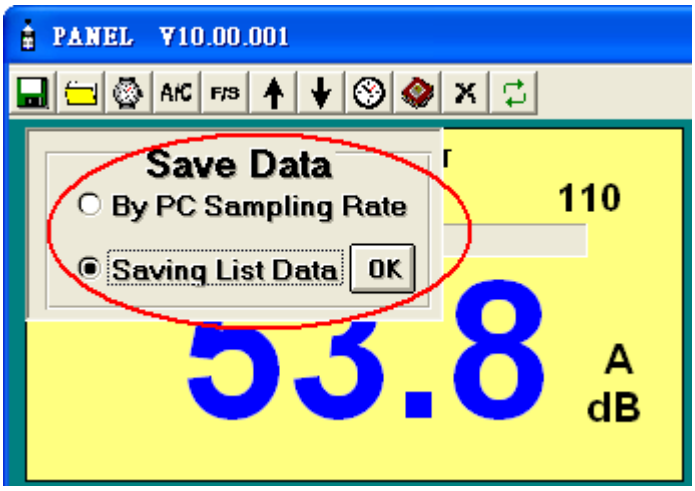
Input a file name and then click "Save" to begin saving data to the file just named.



Click  button to stop recording.

Saving List Data

Click  button.



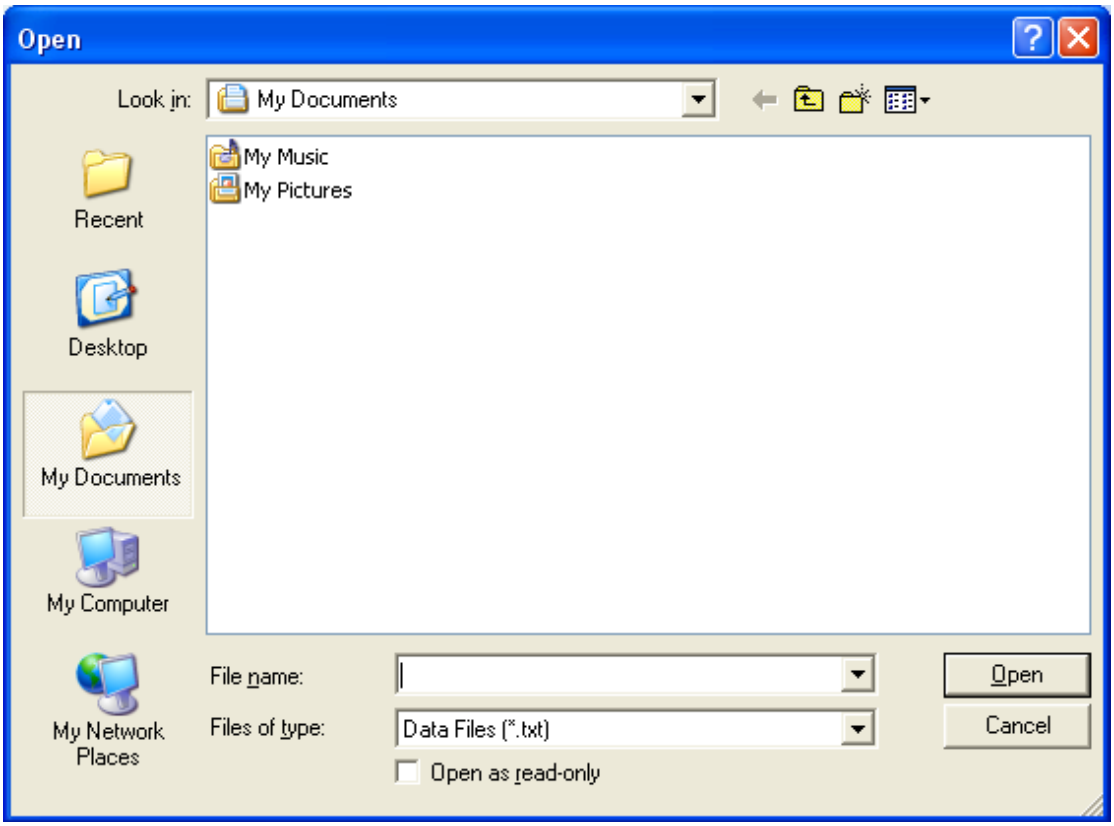
Select “Saving List Data” and then click “OK” to confirm.

C. Download Data

1. Download Data from Hard Disk

Click  button. The Open window, shown below, appears

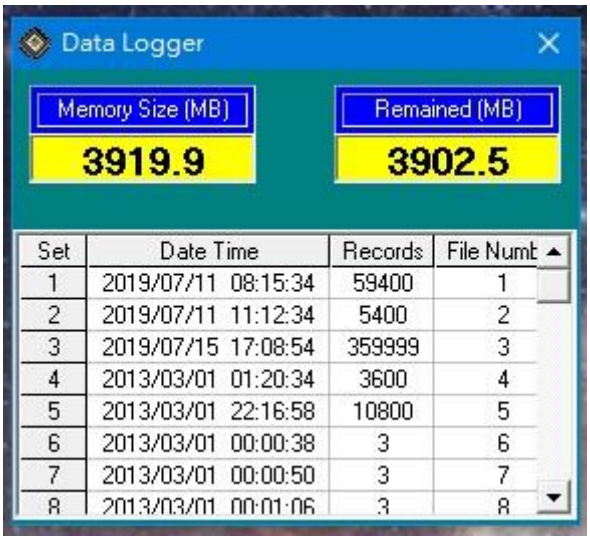
Input



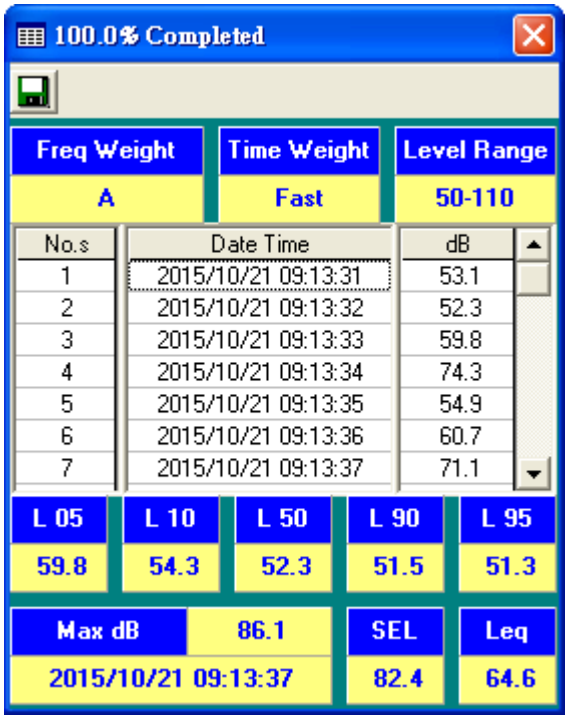
Input the file that was selected earlier and then click the Open button.

2. Download Data from EEP ROM

Click  button. The Data Logger window, shown below, will open.



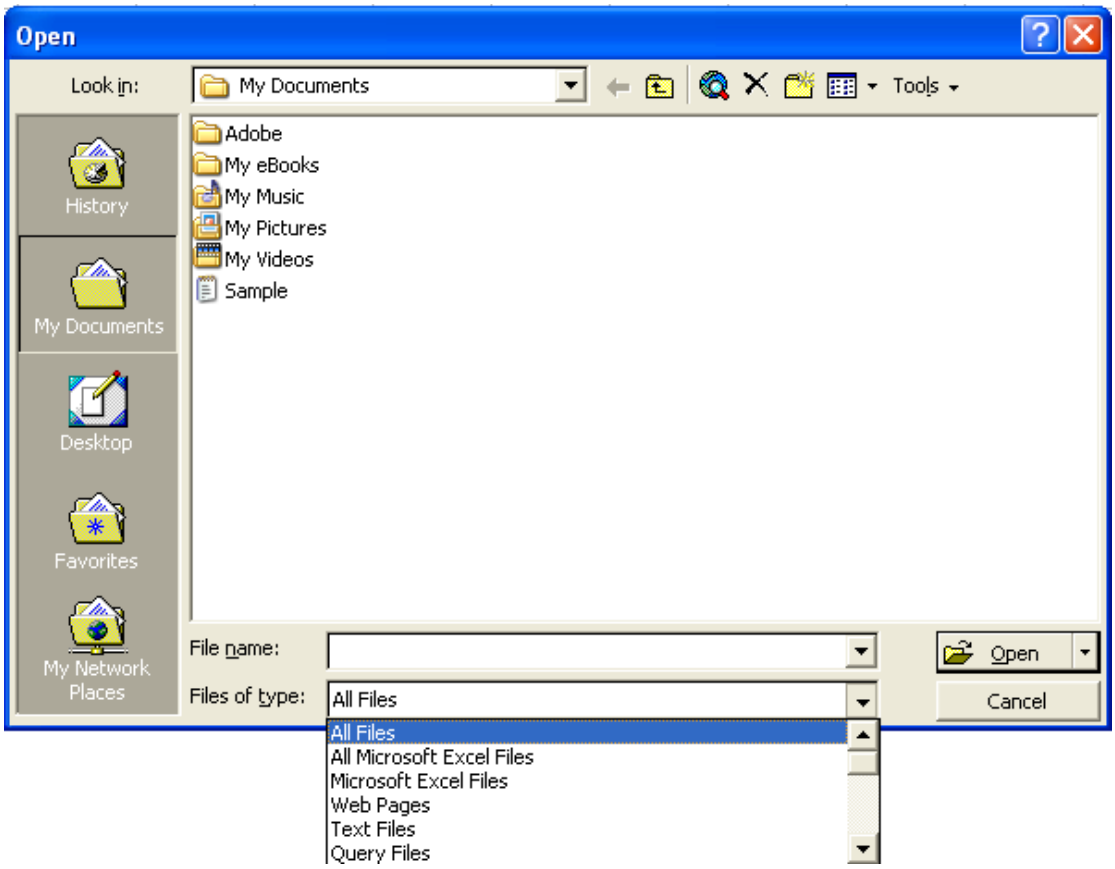
Click on a SET number to view the set's details. For example, in the window above, there are 3 sets from which to choose. The list below is an example of an opened set. (Max read record 349999)



D. Data Convert

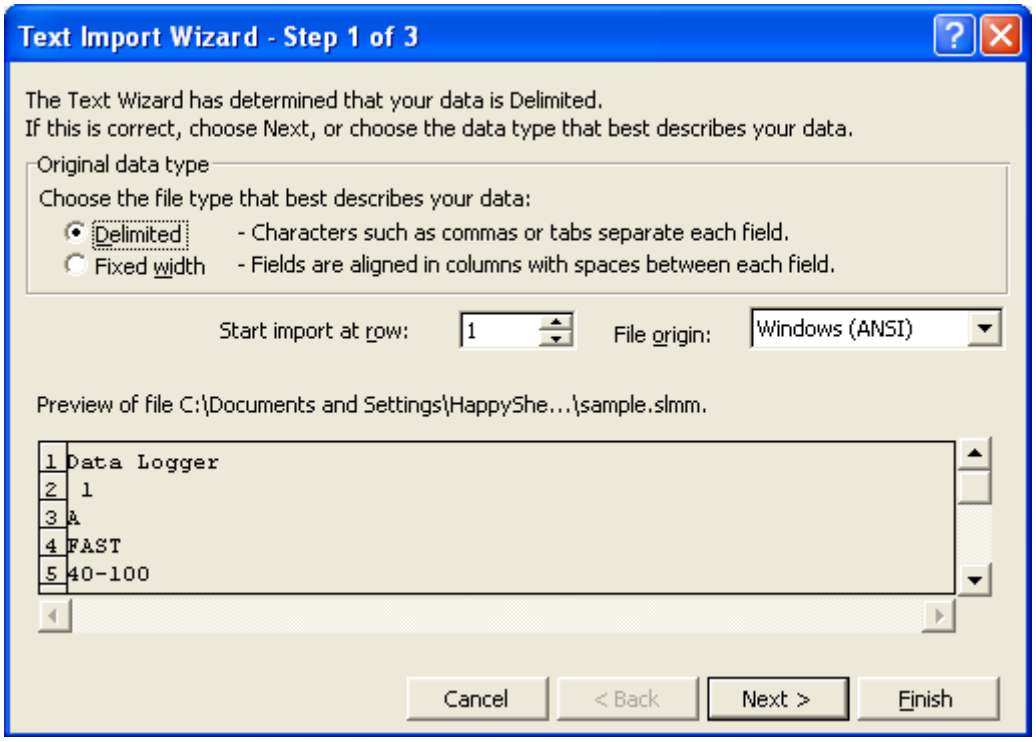
1. Apply for Excel

Open Microsoft Excel, find the file saved in Excel type, for example, test.xls.

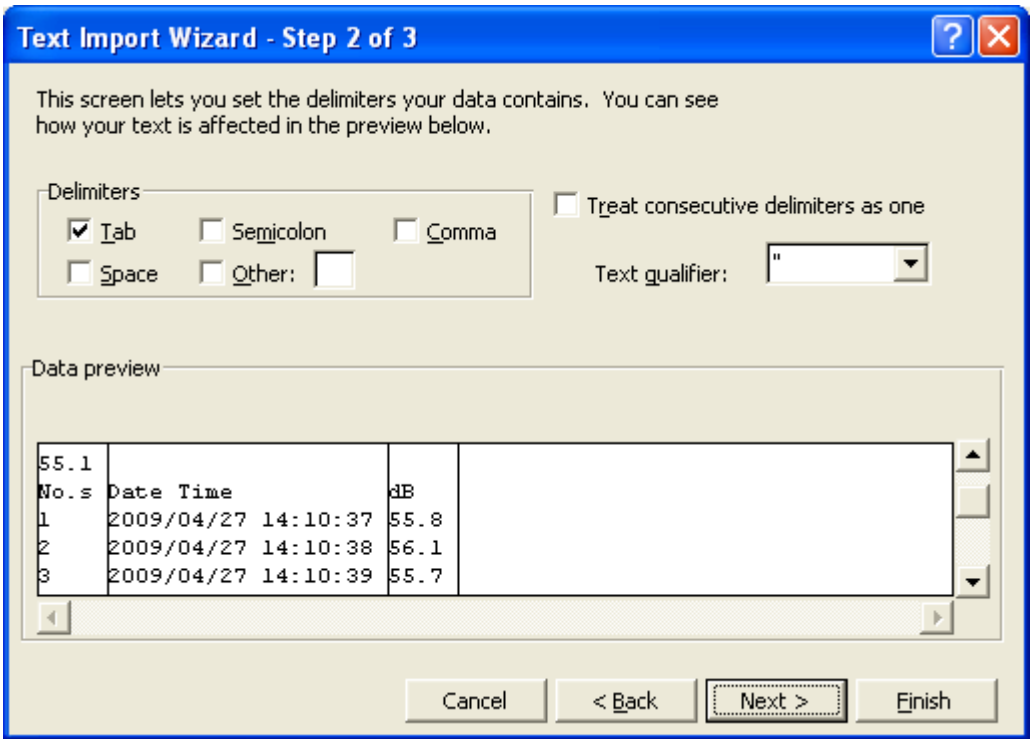


or find any file already saved in HDD, for example, sample.dat.

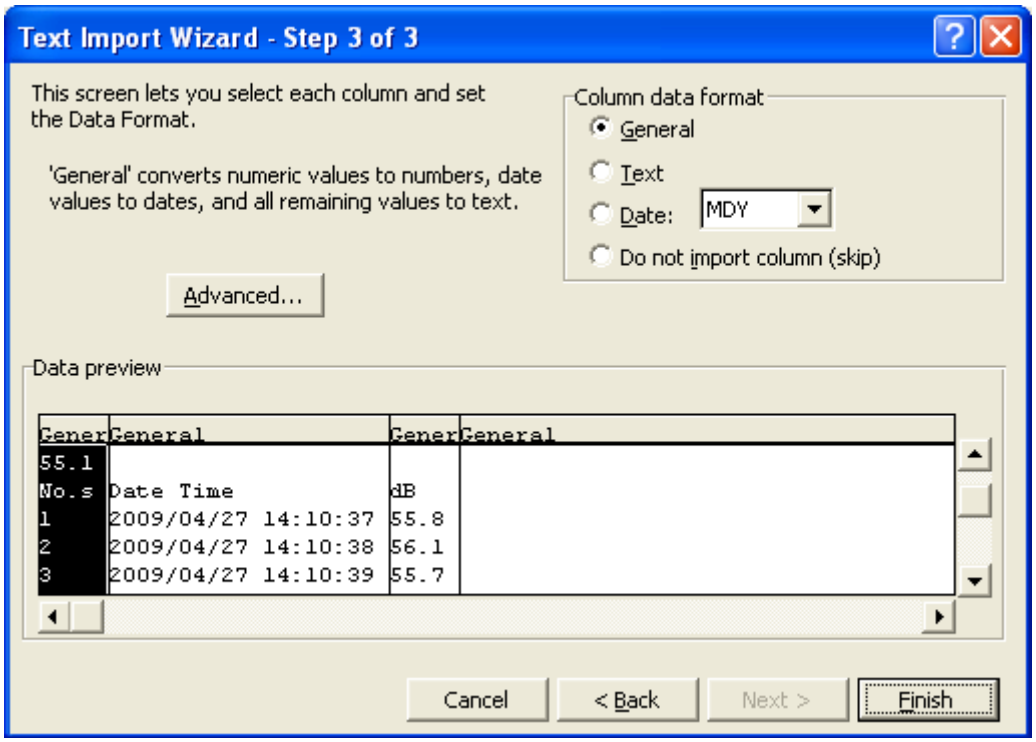
The "Text Import Wizard" then appears. Follow the steps 1 to 3 to complete.



Click Next> button



Click Next> button

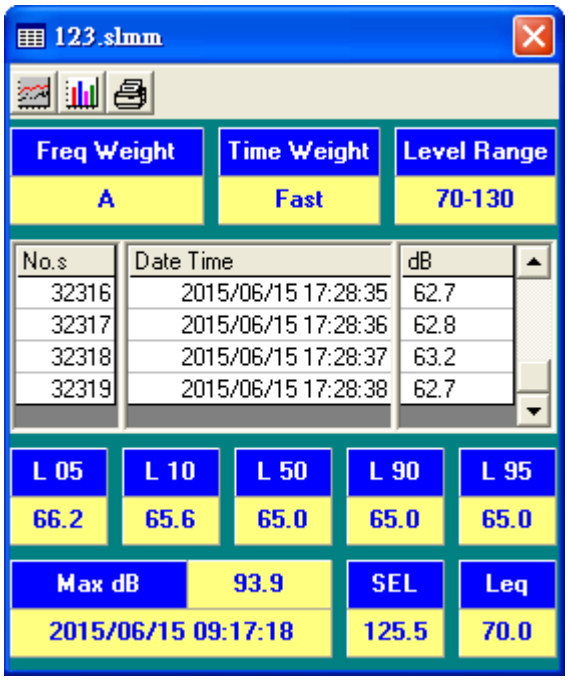


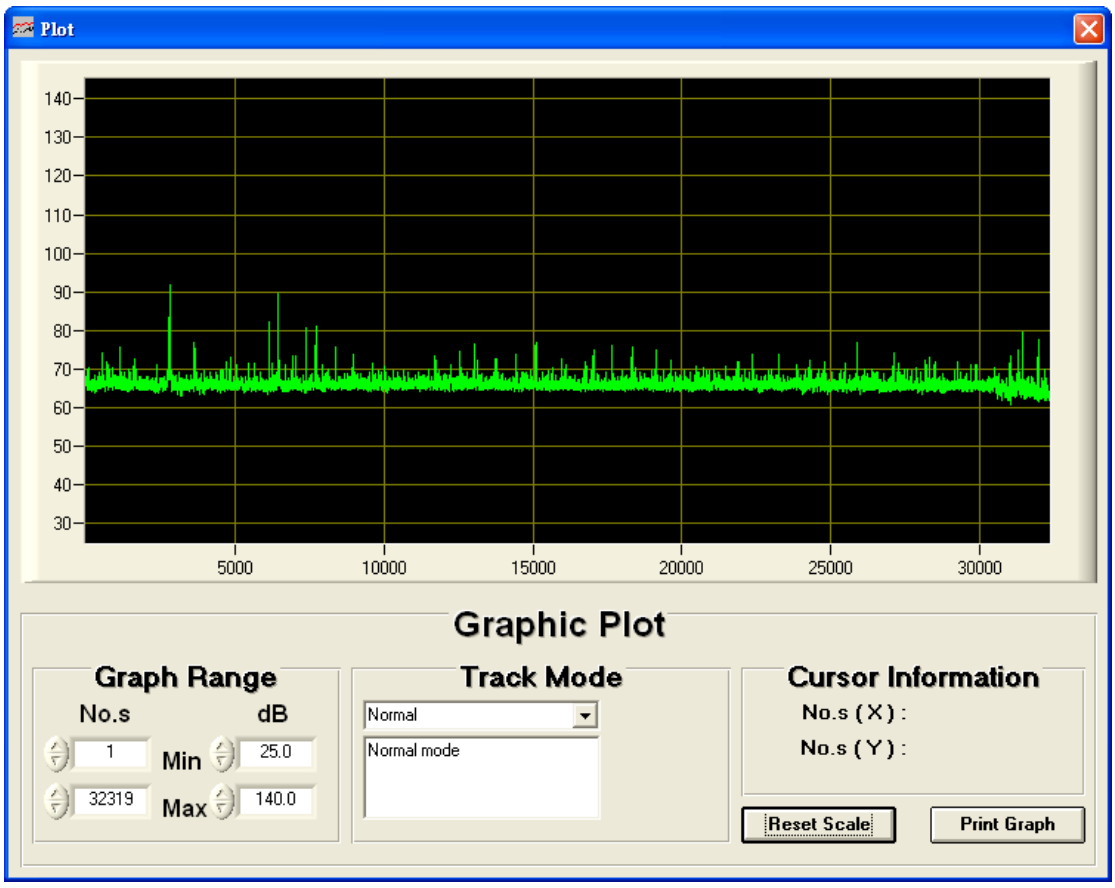
Click **Finish** button

	A	B	C	D
1	Data Logger 2			
2	SET 1			
3	A			
4	Fast			
5	Range 60-120			
6	L05 72.3			
7	L10 71.9			
8	L50 69.8			
9	L90 67.5			
10	L95 63.4			
11	Max 81.8			
12	2013/3/1 00:20			
13	SEL 105.6			
14	Leq 70.1			
15	No.s	Date Time	dB	
16	1	2013/3/1 00:20	69.4	
17	2	2013/3/1 00:20	70.7	
18	3	2013/3/1 00:20	69.3	
19	4	2013/3/1 00:20	70.3	
20	5	2013/3/1 00:20	71.6	
21	6	2013/3/1 00:20	68.5	
22	7	2013/3/1 00:20	69.6	
23	8	2013/3/1 00:20	71	
24	9	2013/3/1 00:20	69	
25	10	2013/3/1 00:20	70.1	

2. Apply for Graph

Open a saved data file in the software program and then click  .



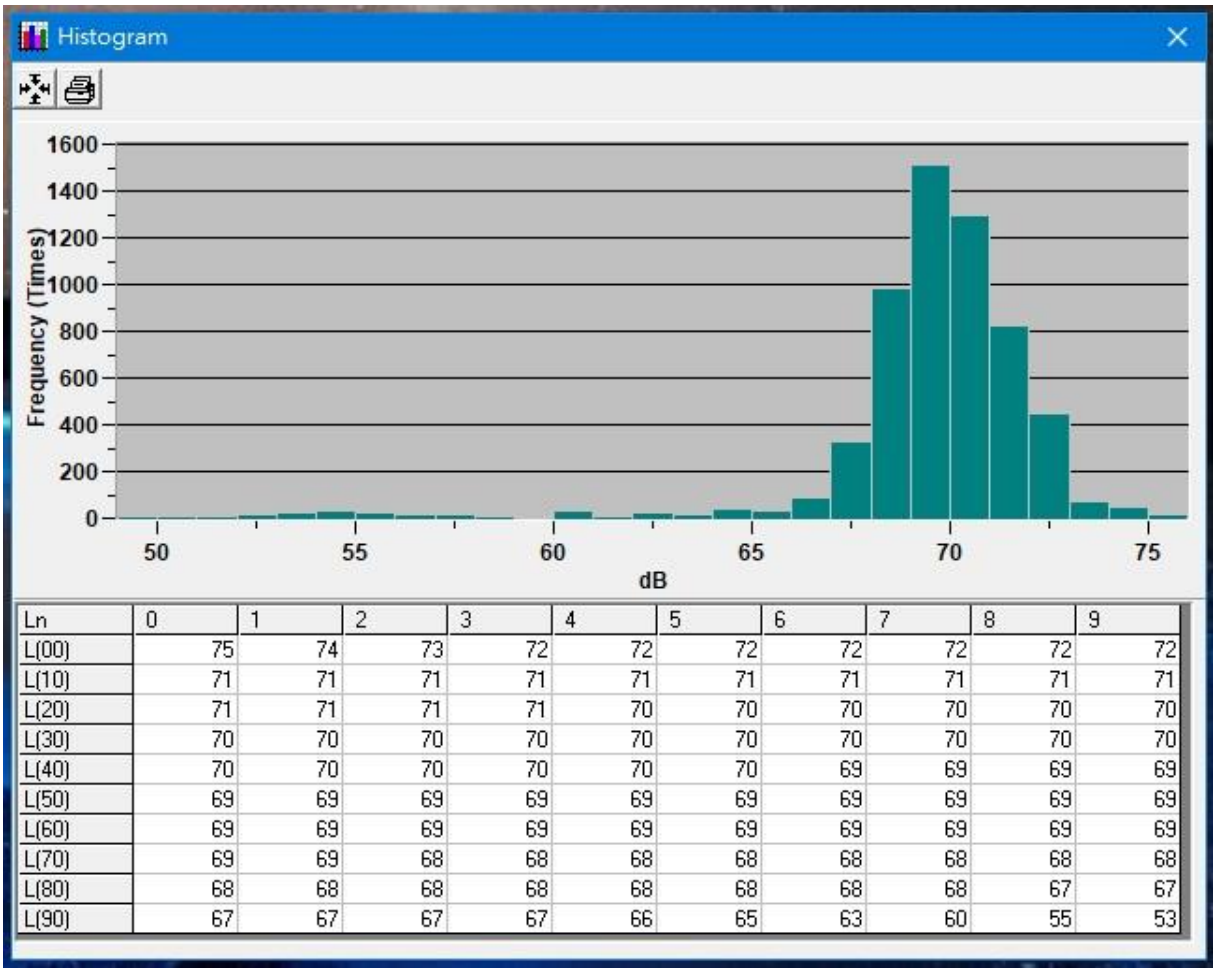


Histogram & Ln (Percentile Sound Level)

Open a saved data file in the software program and then click  .

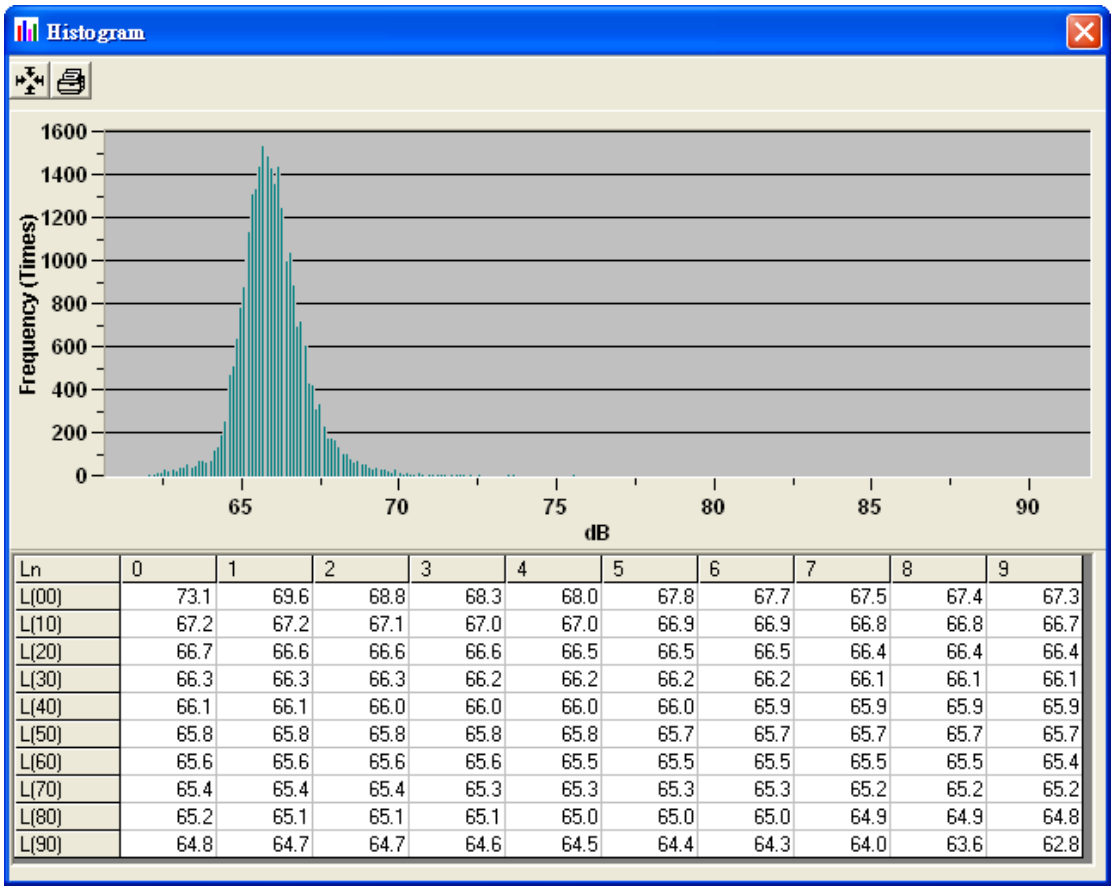


In the window above, click  for the Revolution of 1 dB



Ln	0	1	2	3	4	5	6	7	8	9
L(00)	75	74	73	72	72	72	72	72	72	72
L(10)	71	71	71	71	71	71	71	71	71	71
L(20)	71	71	71	71	70	70	70	70	70	70
L(30)	70	70	70	70	70	70	70	70	70	70
L(40)	70	70	70	70	70	70	69	69	69	69
L(50)	69	69	69	69	69	69	69	69	69	69
L(60)	69	69	69	69	69	69	69	69	69	69
L(70)	69	69	68	68	68	68	68	68	68	68
L(80)	68	68	68	68	68	68	68	68	67	67
L(90)	67	67	67	67	66	65	63	60	55	53

Click [0.1 dB] for the Revolution of 0.1 dB



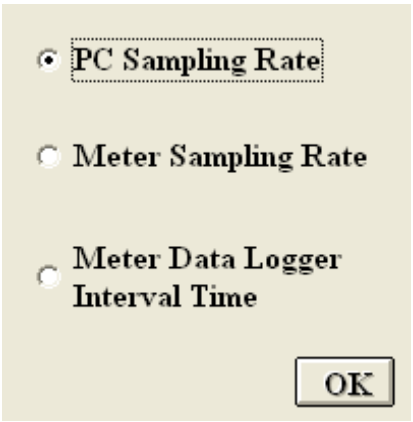
Ln	0	1	2	3	4	5	6	7	8	9
L(00)	73.1	69.6	68.8	68.3	68.0	67.8	67.7	67.5	67.4	67.3
L(10)	67.2	67.2	67.1	67.0	67.0	66.9	66.9	66.8	66.8	66.7
L(20)	66.7	66.6	66.6	66.6	66.5	66.5	66.5	66.4	66.4	66.4
L(30)	66.3	66.3	66.3	66.2	66.2	66.2	66.2	66.1	66.1	66.1
L(40)	66.1	66.1	66.0	66.0	66.0	66.0	65.9	65.9	65.9	65.9
L(50)	65.8	65.8	65.8	65.8	65.8	65.7	65.7	65.7	65.7	65.7
L(60)	65.6	65.6	65.6	65.6	65.5	65.5	65.5	65.5	65.5	65.4
L(70)	65.4	65.4	65.4	65.3	65.3	65.3	65.3	65.2	65.2	65.2
L(80)	65.2	65.1	65.1	65.1	65.0	65.0	65.0	64.9	64.9	64.8
L(90)	64.8	64.7	64.7	64.6	64.5	64.4	64.3	64.0	63.6	62.8

E. Sampling Time

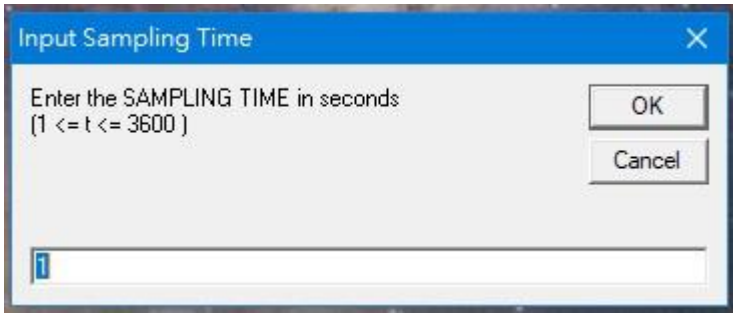
1. PC Sampling Rate:

(rate at which the PC collects readings while connected to the meter)

Click  on the **Menu Bar.**



Choose “PC Sampling Rate” and then click “OK” buton.

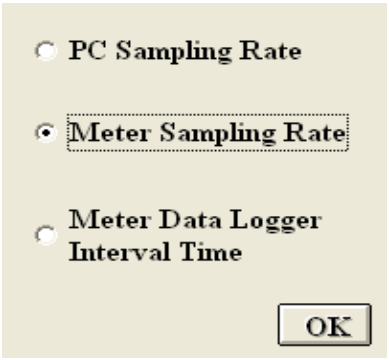


In the **Input Sampling Time** dialog box, input a sampling time and then click "**OK**" button to confirm.

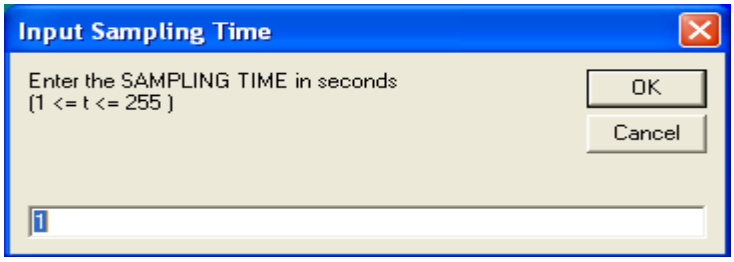
2. Meter Sampling Rate:

(rate at which meter stores readings)

Click  on the **Menu Bar.**



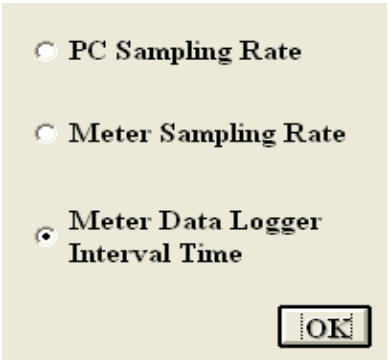
Choose “Meter Sampling Rate” and then click “OK” button.



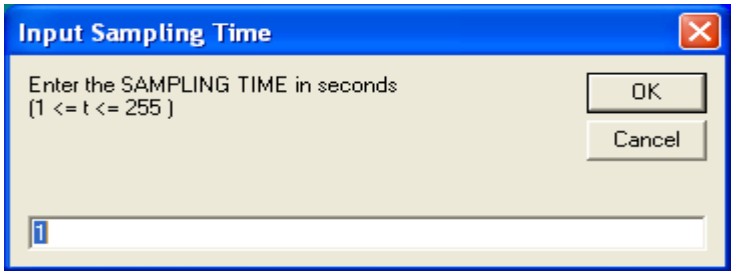
Input a sampling time and then click "**OK**" button to confirm.

3. Meter Data Logger Interval Time

Click  on the **Menu Bar.**



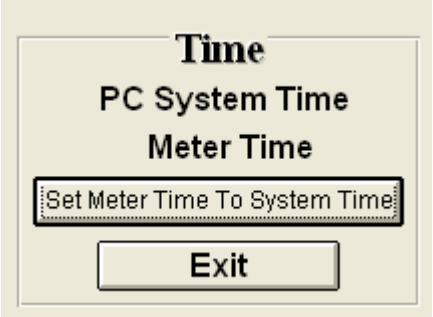
Choose “Meter Data Logger Interval Time” and then click “OK” button.



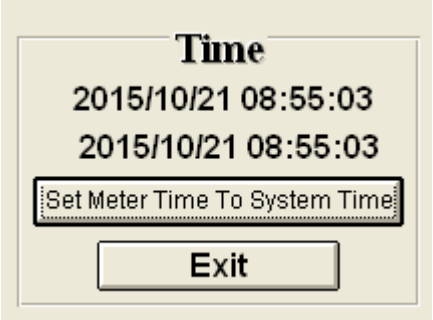
Input a sampling time and then click "**OK**" button to confirm.

F. RTC (Real Time Clock)

Click  on the **Menu Bar** to set the meter time to PC system time.



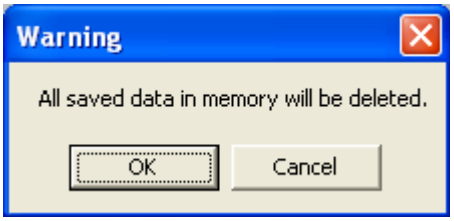
Click  to show PC System Time or  to show Meter Time.



Click  to set the meter time to PC system time.

G. Erase Data Logger

Click  on the Menu Bar. The dialog boxshown below, will open.



Click “OK” to confirm.

H. Reset

Click  on the Menu Bar to reset the List and Graphic data.