

# Datalogger and RS232 Interface

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# RS232 Protocol

## 1. RS232 Settings :

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

## 2. 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→20-200Hz Filter		Stop	Pause	Play	00→Fast 01→Slow 10→Impulse 11→ x	

## 3. Command :

“A” → 3 Bytes of Last Address

“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

“L” → No.s of EEPROM

## Data Logger

“K” → 02H

+ 00H + 55H + AAH + 00H  
+ Interval High + Interval Low + Function2 + Function1  
+ SPL High + SPL Low + SPL High + SPL Low + .....  
+ Time of Start Recording (ssnnhhDDMMYY)  
+ Time of Stop Recording (ssnnhhDDMMYY)  
+ Time of Max dB (ssnnhhDDMMYY)  
+ Time of Min dB (ssnnhhDDMMYY)  
+ Time of Peak (ssnnhhDDMMYY)  
+ XXXX  
+ Max High + Max Low  
+ Min High + Min Low  
+ Peak High + Peak Low  
+ XXXXXXXXXXXX  
+ 00H + 55H + AAH + 00H  
+ .....  
+ 03H

**x** : don't care

# **Hardware Requirements and Setup**

## **PC HardWare Requirements :**

HDD, CD Rom, 486 PC or above, with available USB port  
EGA or higher monitor  
4M bytes or more memory size

## **PC HardWare Setup :**

Connect the Meter with PC by USB cable

# Software Requirements and Setup

- 1 Start up windows XP / 7 operating system
- 2 Close all other applications
- 3 Insert the disk in CD drive



To install USB to Serial driver, click .

To install Serial to USB driver, click .

Follow the on-screen instructions.

1).



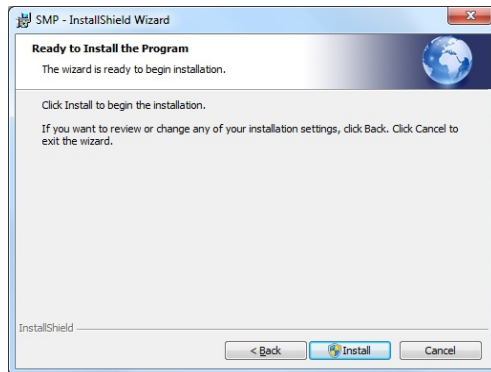
Setup will run automatically.

2).



Click Next> button

3).



Click **Install** button

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

4).

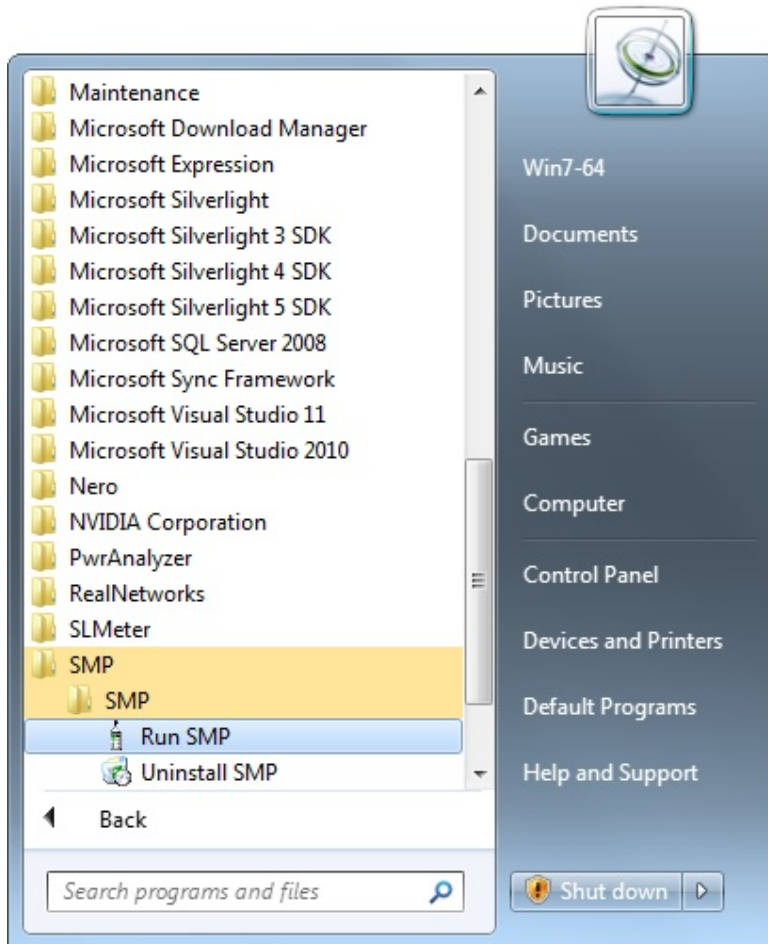


Click **Finish** button to complete.

# On-Line Operation

## ■ Run the software

1. Start → All Programs → SMP → SMP → Run SMP

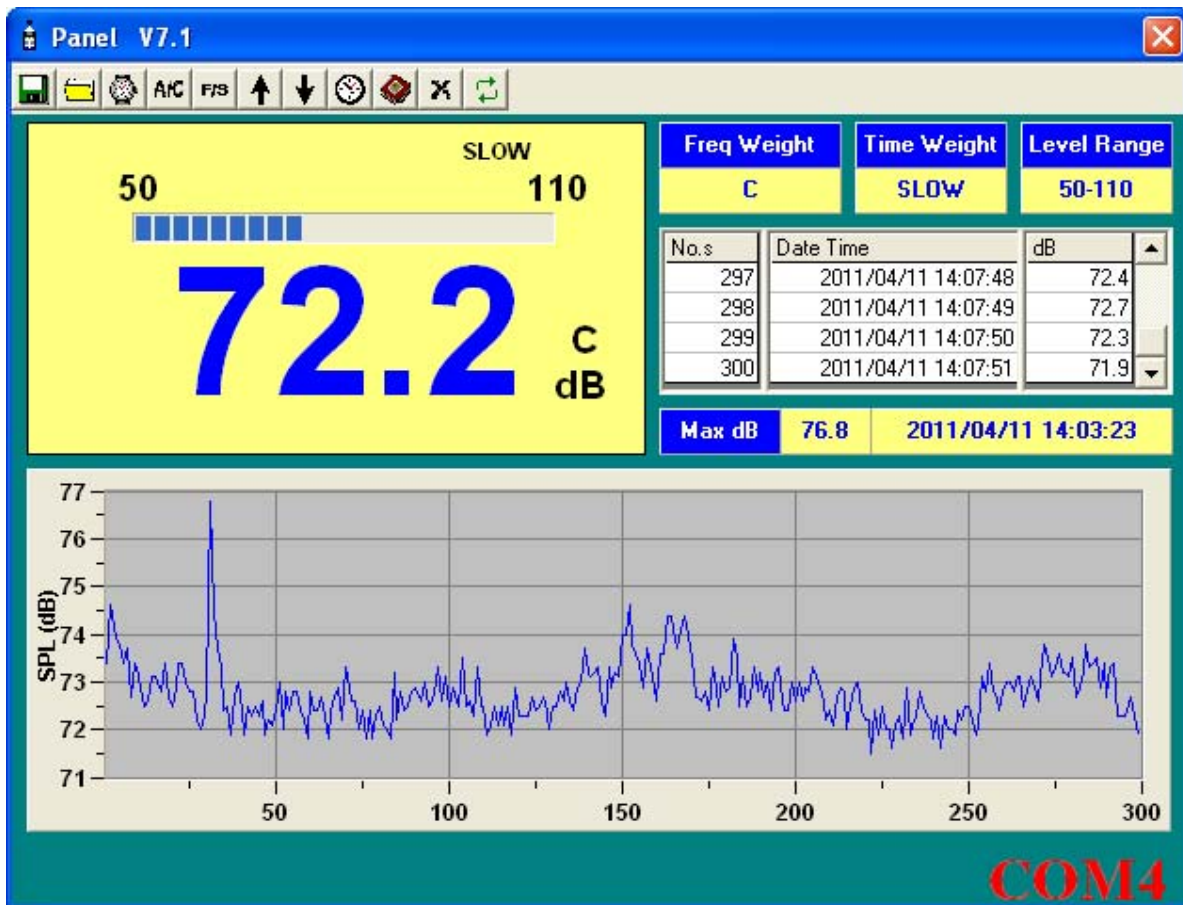


2.

Click an available COM port



3. Main software screen



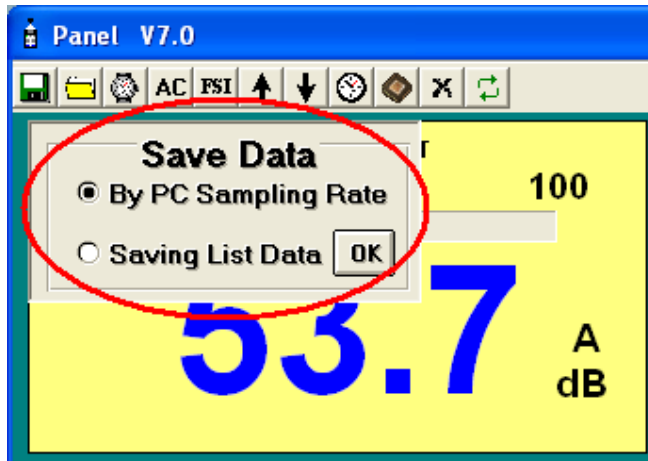


## ■ Record

### Save to Hard Disk (PC)

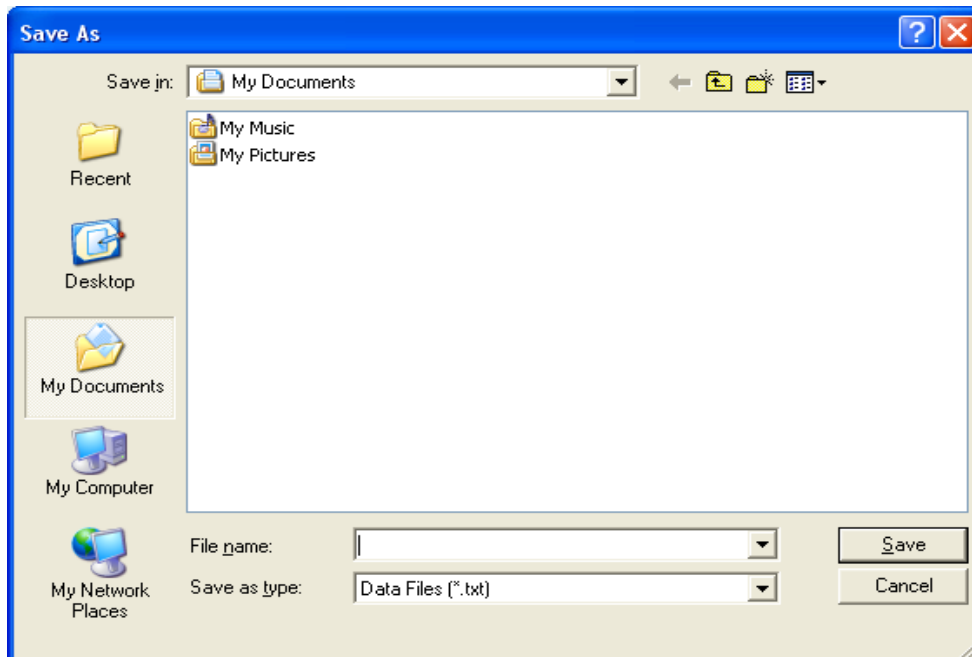
By PC Sampling Rate

Click  button.

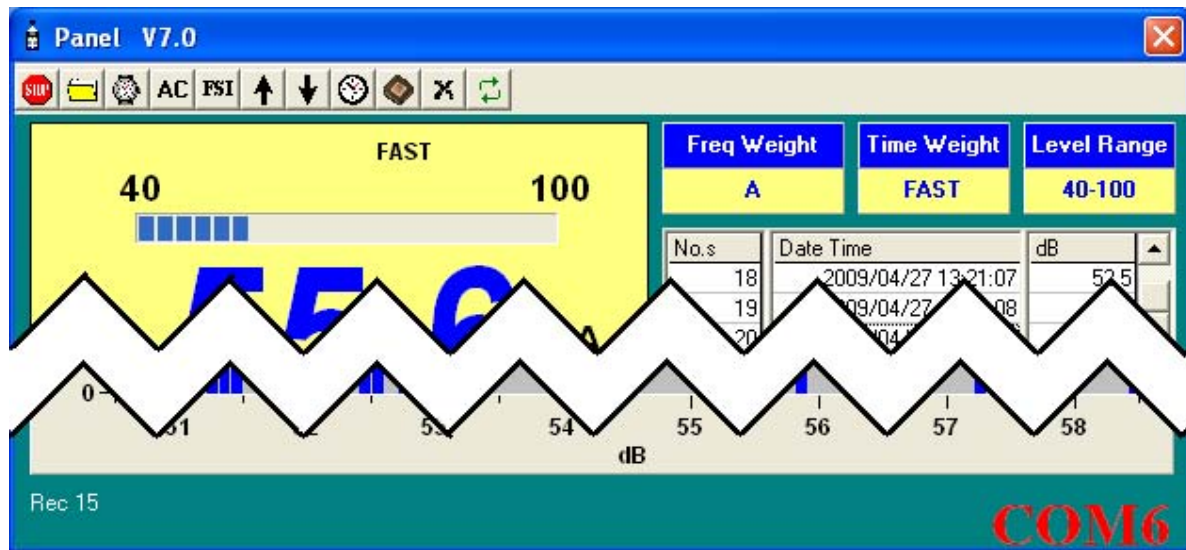



Select “By PC Sampling Rate” and then click “OK” to confirm.

The dialog box shown below, will appear.



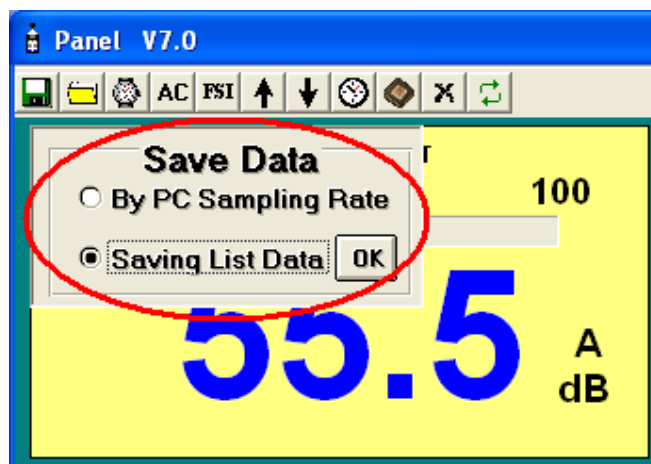
Input a file name and then click "Save" to begin saving data to the file just named.



Click  button to stop recording.

Saving List Data


Click  button.

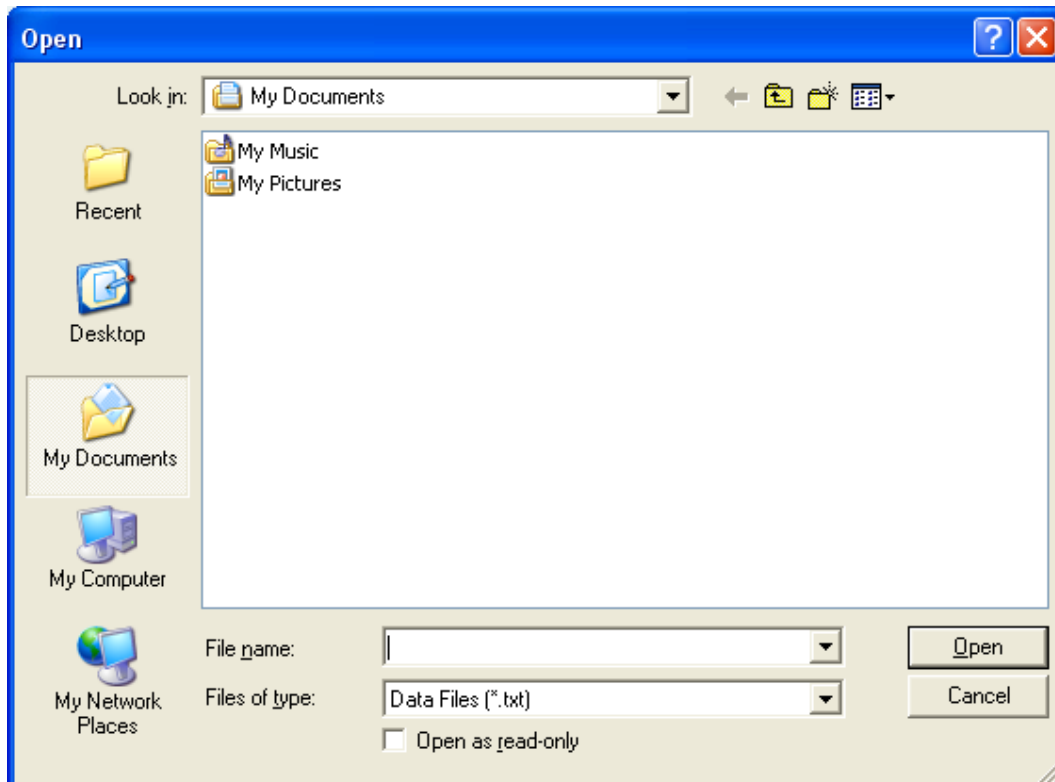


Select "Saving List Data" and then click "OK" to confirm.

## Download Data


### 1. Download Data from Hard Disk

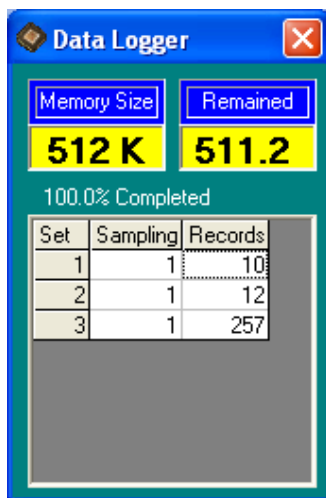
Click  button. The Open window, shown below, appears



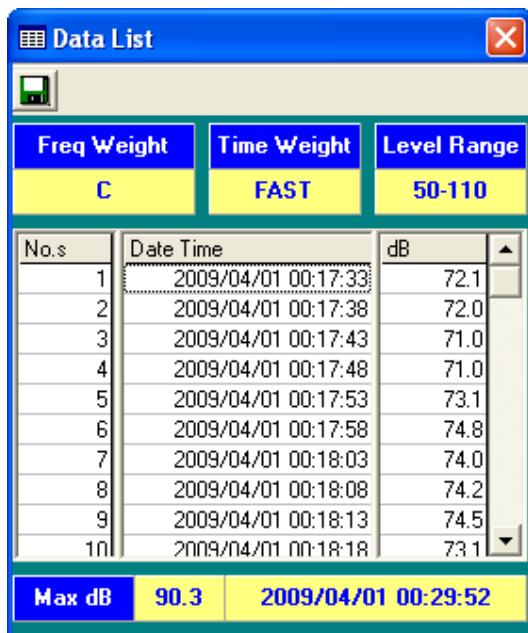
Input the file that was selected earlier and then click the Open button.

## 2. Download Data from EEP ROM

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



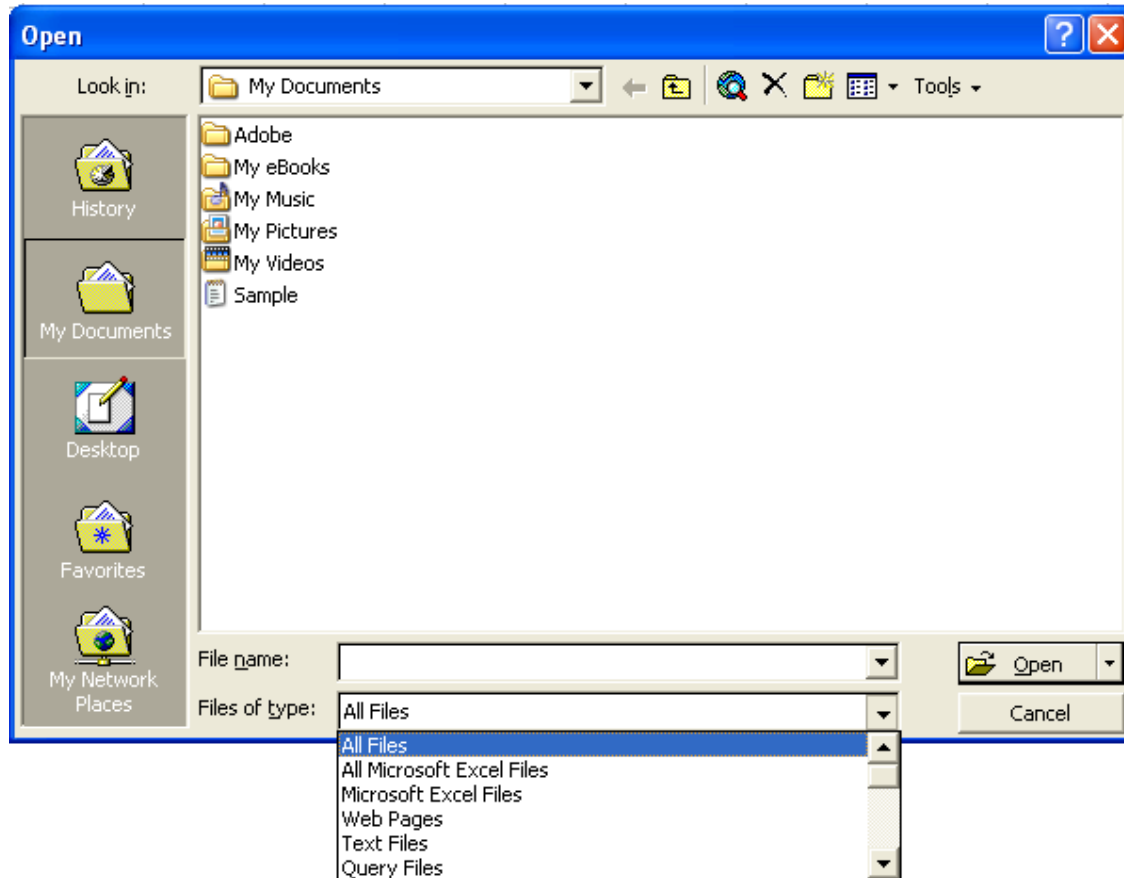
Click on a SET number to view the set's details. For example, in the window above, there are 3 sets from which to choose. The list below is an example of an opened set.



## ■ Data Convert

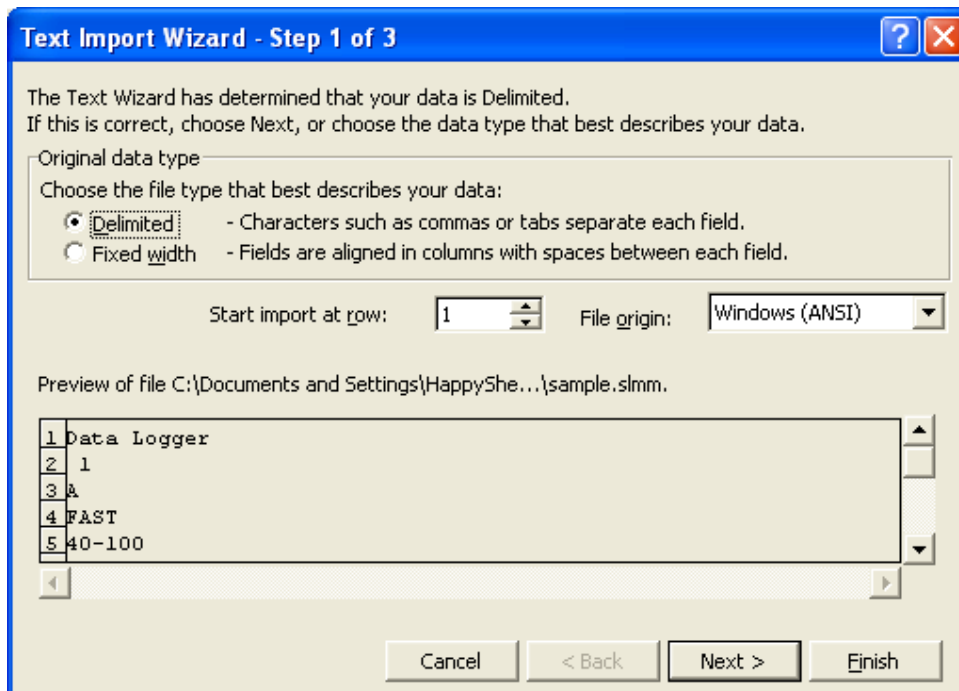
### Apply for Excel

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.



The Text Wizard has determined that your data is Delimited.  
If this is correct, choose Next, or choose the data type that best describes your data.

Original data type

Choose the file type that best describes your data:

☒ Delimited - Characters such as commas or tabs separate each field.  
☐ Fixed width - Fields are aligned in columns with spaces between each field.

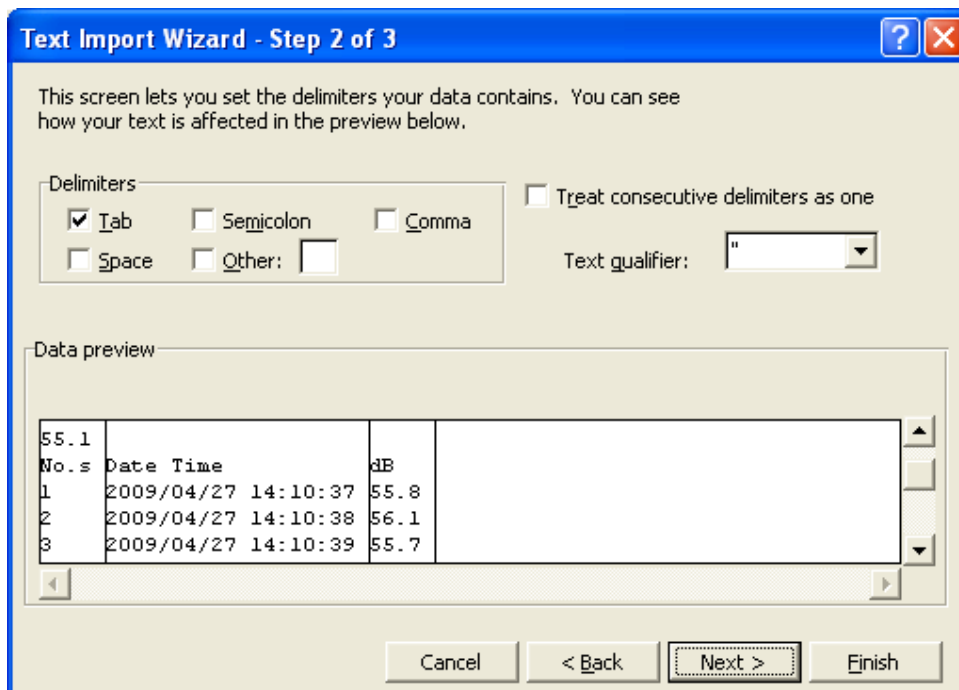
Start import at row:  File origin:

Preview of file C:\Documents and Settings\HappyShe...\sample.slm.

1	Data Logger
2	1
3	A
4	FAST
5	40-100

Buttons: Cancel, < Back, Next >, Finish

Click Next> button



This screen lets you set the delimiters your data contains. You can see how your text is affected in the preview below.

Delimiters

☒ Tab ☐ Semicolon ☐ Comma  
☐ Space ☐ Other:

☐ Treat consecutive delimiters as one

Text qualifier:

Data preview

55.1			
No.s	Date Time		dB
1	2009/04/27 14:10:37	55.8	
2	2009/04/27 14:10:38	56.1	
3	2009/04/27 14:10:39	55.7	

Buttons: Cancel, < Back, Next >, Finish

Click Next> button

**Text Import Wizard - Step 3 of 3**

This screen lets you select each column and set the Data Format.

'General' converts numeric values to numbers, date values to dates, and all remaining values to text.

[Advanced...](#)

Column data format

☒ General

☐ Text

☐ Date: MDY

☐ Do not import column (skip)

Data preview


General	General	General	General
55.1			
No.s	Date Time		dB
1	2009/04/27 14:10:37		55.8
2	2009/04/27 14:10:38		56.1
3	2009/04/27 14:10:39		55.7




Cancel < Back Next > Finish

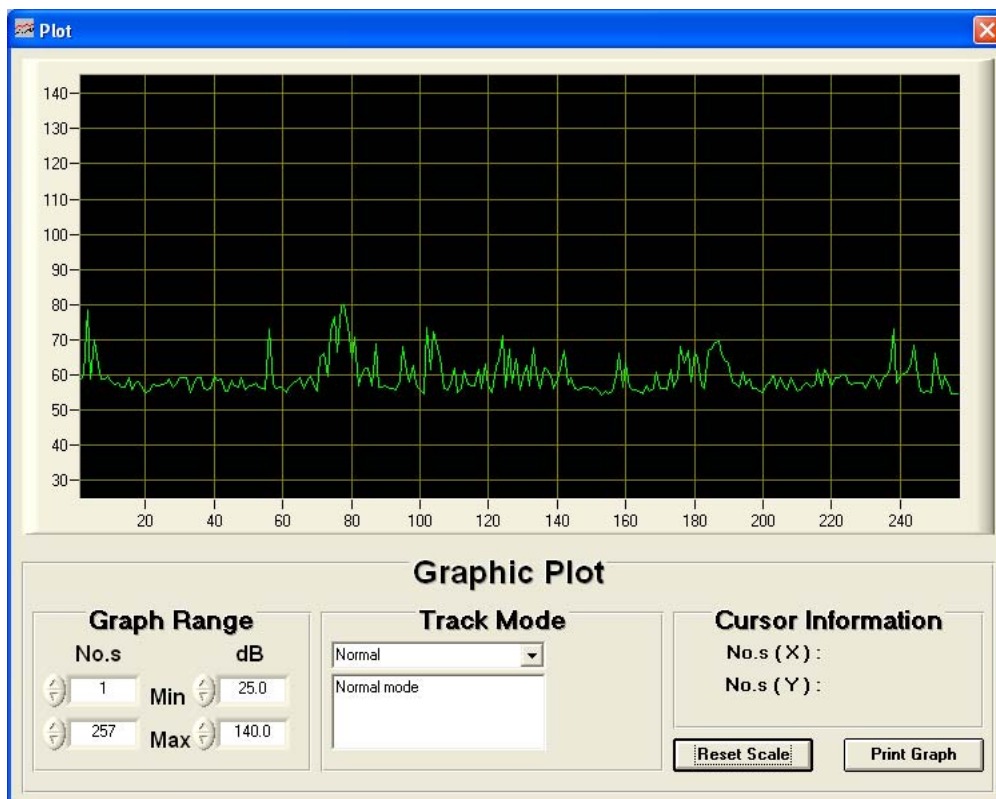
Click **Finish** button

	A	B	C
1	Real Time		
2	1		
3	C		
4	SLOW		
5	50-110		
6	72.9		
7	4/11/2011 10:10		
8	XXX		
9	XXX		
10	No.s	Date Time	dB
11	1	4/11/2011 10:10	72.1
12	2	4/11/2011 10:10	72.5
13	3	4/11/2011 10:10	72.4
14	4	4/11/2011 10:10	72.9
15	5	4/11/2011 10:10	72.4
16	6	4/11/2011 10:10	72
17	7	4/11/2011 10:10	72.4
18	8	4/11/2011 10:10	72.6
19	9	4/11/2011 10:10	72.4
20	10	4/11/2011 10:10	72.1
21	11	4/11/2011 10:10	71.9
22	12	4/11/2011 10:10	72.8
23	13	4/11/2011 10:10	72.2
24	14	4/11/2011 10:10	72.8
25	15	4/11/2011 10:10	72.9

## Apply for Graph

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

Sample.slmm			
  			
Freq Weight		Time Weight	Level Range
C		SLOW	50-110
No.s	Date Time	dB	
1	2011/04/11 10:10:25	72.1	
2	2011/04/11 10:10:26	72.5	
3	2011/04/11 10:10:27	72.4	
4	2011/04/11 10:10:28	72.9	
5	2011/04/11 10:10:29	72.4	
6	2011/04/11 10:10:33	72.0	
7	2011/04/11 10:10:34	72.4	
8	2011/04/11 10:10:35	72.6	
9	2011/04/11 10:10:36	72.4	
10	2011/04/11 10:10:37	72.1	
Max dB		72.9	2011/04/11 10:10:28





## Histogram & Ln ( Percentile Sound Level )

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

**Resolution**

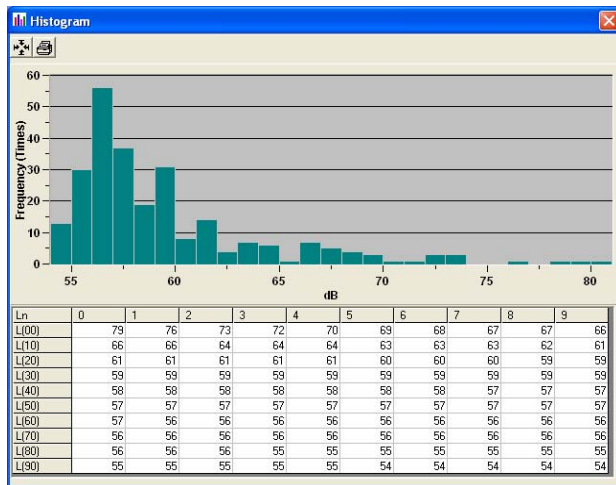
1 dB

0.1 dB

In the window above, click 

1 dB

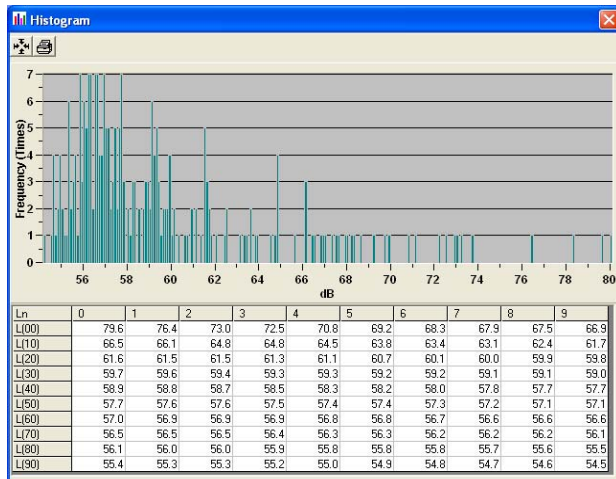
 for the Revolution of 1 dB



Click 

0.1 dB


 for the Revolution of 0.1 dB

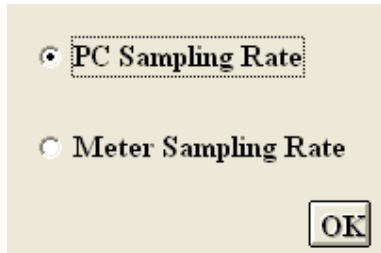


## ■ Sampling Time

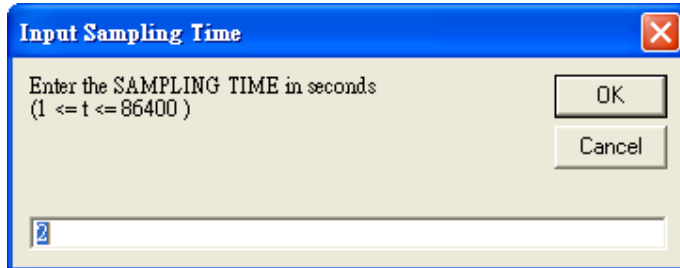
### PC Sampling Rate:

(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" button.

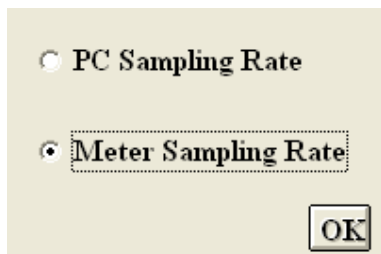


In the **Input Sampling Time** dialog box, input a sampling time and then click "OK" button to confirm.

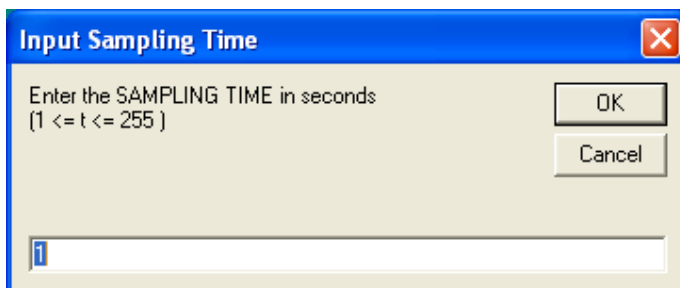
### Meter Sampling Rate:

(rate at which meter stores readings)

Click  on the **Menu Bar**.




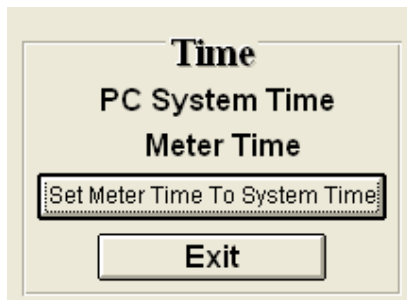
Choose "PC Sampling Rate" and then click "OK" button.



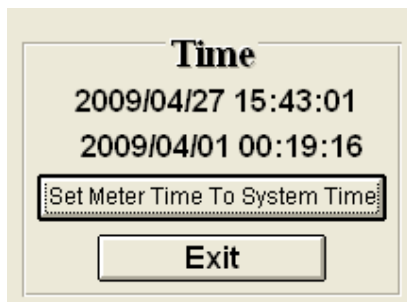
Input a sampling time and then click "OK" button to confirm.


## ■ RTC ( Real Time Clock)

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




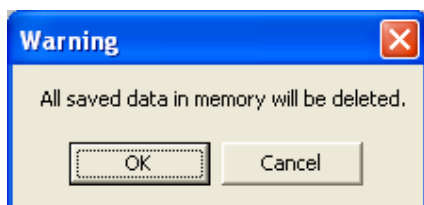
Click **PC System Time** to show PC System Time or **Meter Time** to show Meter Time.



Click  to set the meter time to PC system time.


## ■ Erase Data Logger

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



Click "OK" to confirm.

## ■ Reset

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