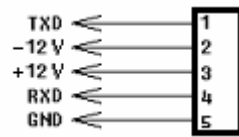


Datalogger and USB Interface

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Wiring Hardware

USB Diagram



Protocol

Read Function (set token - out token - in token)

Byte0	Byte1	Byte2	Byte3	Byte4
00	2	command		

Command :

01 : LCD screen

02 : interval(1byte,hex)、 user_value(2byte,hex)、

03 : real time clock (BCD code)

04 : clarify if sd card exist

Byte1bit6 : 0=>no SD card 1=> SD card exist(1byte)

Byte1 SD capacity : 4 bytes (Byte2345)

Byte2 SD remained capacity : 4 bytes (Byte6789)

05 : Meter Model 132s

06 : recorded files in SD card

07 + Set No.: Details of Recorded data set

08 + Set No.: bytes of recorded set (4 bytes) + start time (17 bytes)

09 : cycling time (6byte)

10 : reservation time 12byte(hex)

Control Function (set token - in token - out token)

Byte0	Byte1	Byte2	Byte3	Byte4
00	1	command		

Command :

- 01 : key_time
- 02 : key_h
- 03 : key_max
- 04 : key_set
- 05 : key_power
- 06 : key_unit
- 07 : key_enter
- 08 : key_zero
- 09 : key_men
- 10 : key_up
- 11 : key_down
- 12 : key_read
- 13 : exit max/min/avg
- 14 : auto recording (USB OFF)
- 15 : set up interval
- 16 : erase auto recording
- 17 : power off
- 18 : set RTC
- 19 : set user data
- 20 : set cycling time
- 21 : set reservation time
- 22 : power %
- 23 : erase manual ecording

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
(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).

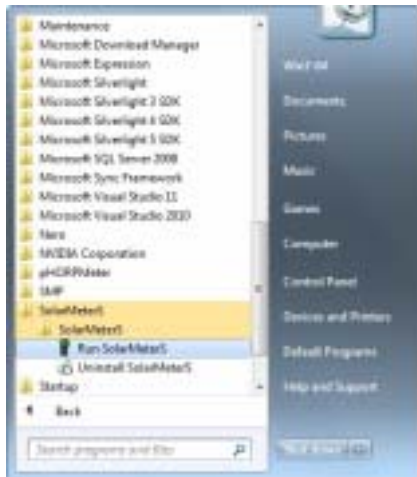


Click **Finish** button to complete.

On-Line Operation

■ Run the software

1. Click "Start" form Start menu then click "All Programs" -> "SolarMeterS" -> "SolarMeterS" -> "Run SolarMeterS"



2. Main software screen



■ Record


Save to Hard Disk (PC)

Click  button. 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.

Save to EEP Rom (Solar Meter)

1. Automatically Record


Press the button  for about 3 seconds to record data. Press that button again (momentarily) to stop recording.

2. Manually Record

Press the button  momentarily to store one reading.

Download Data


1. Download Data from Hard Disk

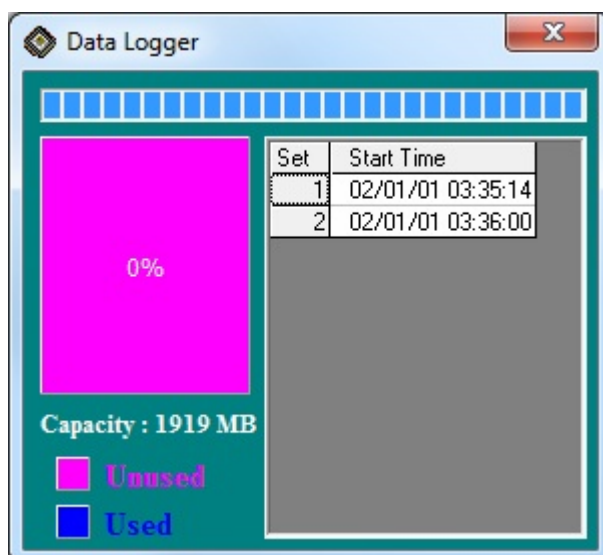
Click  button. The Open window, shown below, appears



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


2. Download Data from EEP ROM

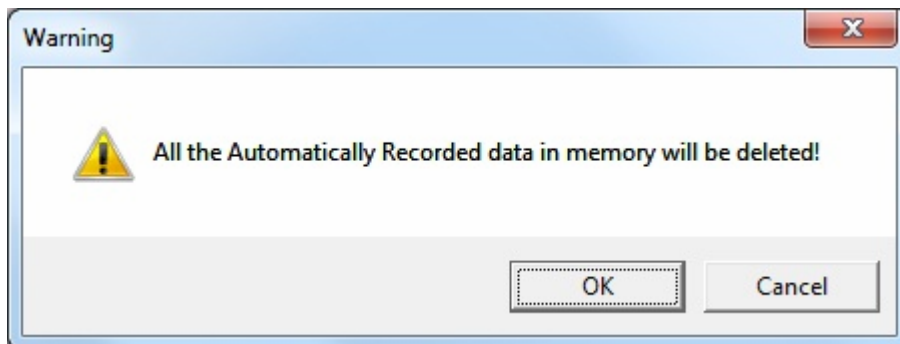
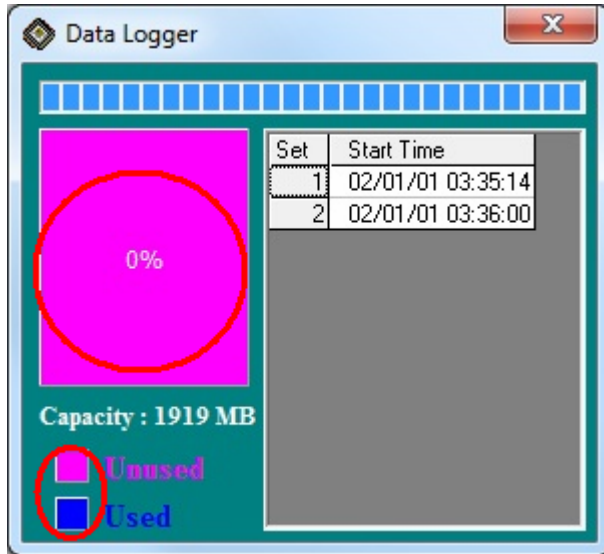
Click  button. The Data Logger window, shown below, will open.



No.s	Date Time	W/(M)2
1	02/01/01 03:35:14	0.0
2	02/01/01 03:35:15	0.0
3	02/01/01 03:35:16	0.0
4	02/01/01 03:35:17	0.0
5	02/01/01 03:35:18	0.0
6	02/01/01 03:35:19	0.0
7	02/01/01 03:35:20	0.0
8	02/01/01 03:35:21	0.0
9	02/01/01 03:35:22	0.0
10	02/01/01 03:35:23	0.0
11	02/01/01 03:35:24	0.0
12	02/01/01 03:35:25	0.0
13	02/01/01 03:35:26	0.0
14	02/01/01 03:35:27	0.0
15	02/01/01 03:35:28	0.0
16	02/01/01 03:35:29	0.0

Click on a SET number to view the set's details. For example, in the window above, there are 7 sets from which to choose. The list below is an example of an opened set.

To erase saved data in EEPROM, click  in the **Menu Bar** or the Memory label (see below) in the Data Logger window



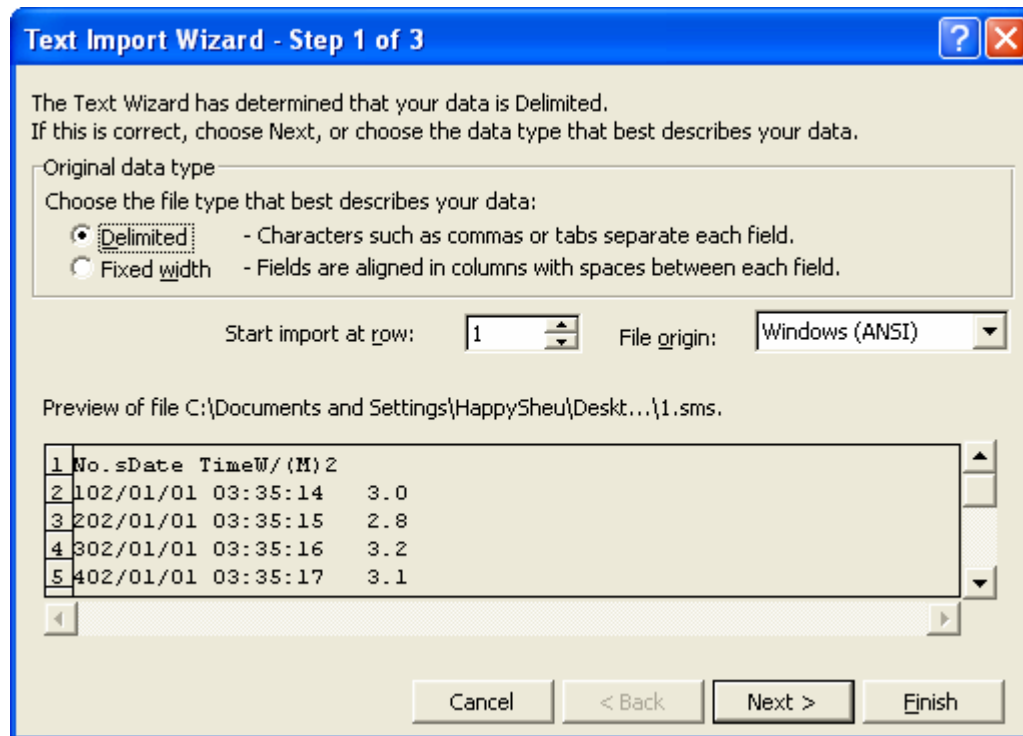
Press OK to confirm.

■ Data Convert

Apply for Excel

Open Microsoft Excel, find the saved

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.

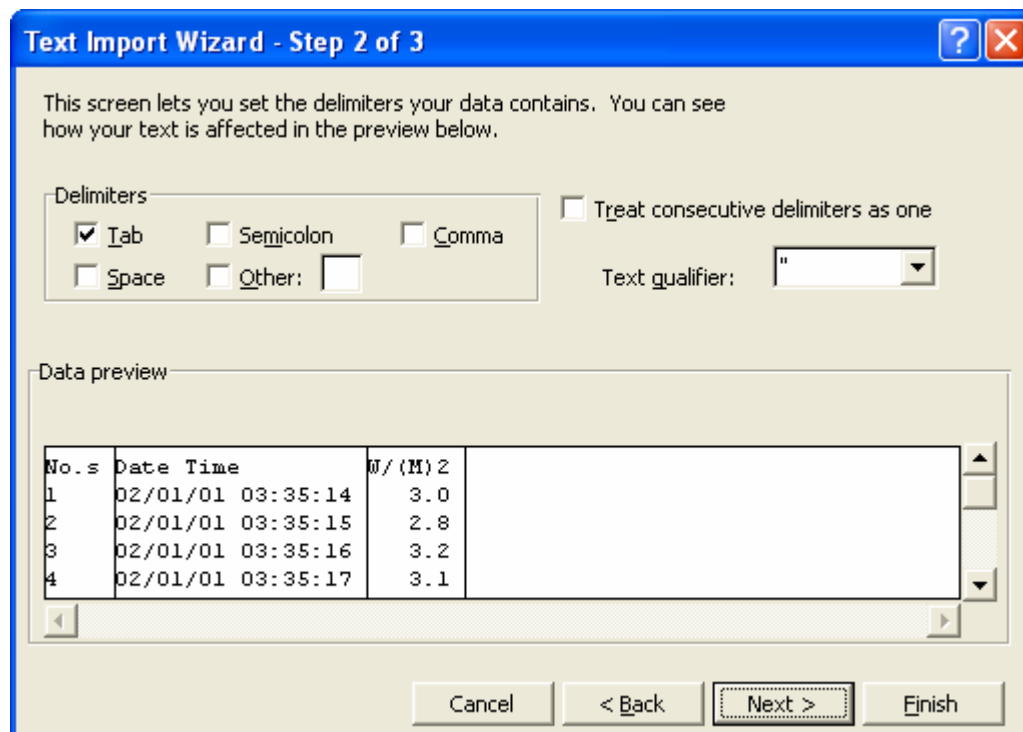
Start import at row: File origin:

Preview of file C:\Documents and Settings\HappySheu\Deskt...\1.sms.

No.s	Date	Time	W/(M)2
1	02/01/01	03:35:14	3.0
2	02/01/01	03:35:15	2.8
3	02/01/01	03:35:16	3.2
4	02/01/01	03:35:17	3.1

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

No.s	Date	Time	W/(M)2
1	02/01/01	03:35:14	3.0
2	02/01/01	03:35:15	2.8
3	02/01/01	03:35:16	3.2
4	02/01/01	03:35:17	3.1

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
No.s	Date Time	W/(M)2	
1	02/01/01 03:35:14	3.0	
2	02/01/01 03:35:15	2.8	
3	02/01/01 03:35:16	3.2	
4	02/01/01 03:35:17	3.1	

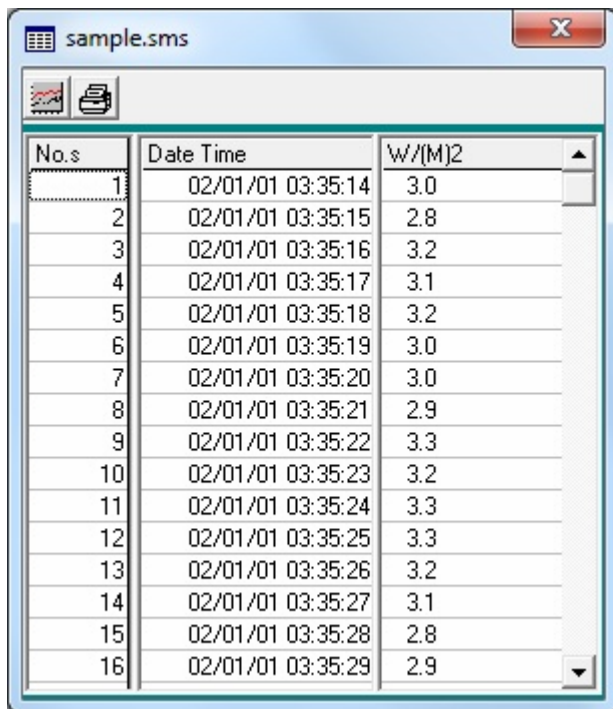
Cancel < Back Next > Finish

Click **Finish** button

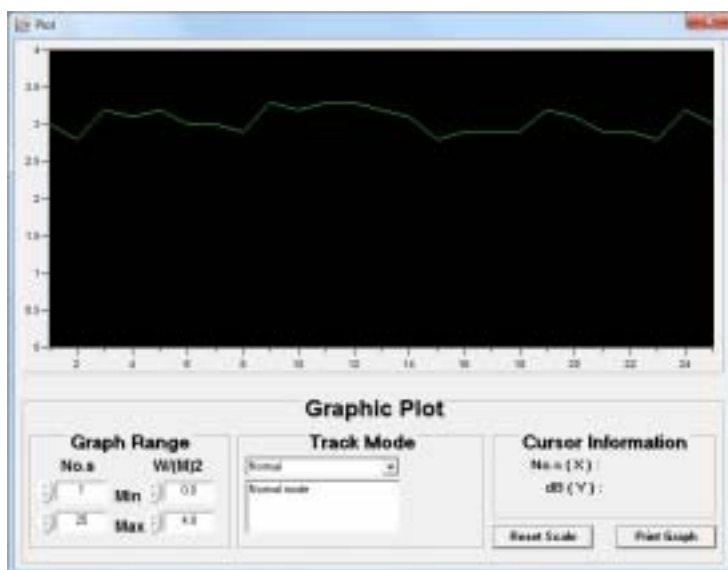
	A	B	C
1	No.s	Date Time	W/(M)2
2	1	02/01/01 03:35:14	3.0
3	2	02/01/01 03:35:15	2.8
4	3	02/01/01 03:35:16	3.2
5	4	02/01/01 03:35:17	3.1
6	5	02/01/01 03:35:18	3.2
7	6	02/01/01 03:35:19	3.0
8	7	02/01/01 03:35:20	3.0
9	8	02/01/01 03:35:21	2.9
10	9	02/01/01 03:35:22	3.3
11	10	02/01/01 03:35:23	3.2
12	11	02/01/01 03:35:24	3.3
13	12	02/01/01 03:35:25	3.3
14	13	02/01/01 03:35:26	3.2
15	14	02/01/01 03:35:27	3.1
16	15	02/01/01 03:35:28	2.8
17	16	02/01/01 03:35:29	2.9
18	17	02/01/01 03:35:30	2.9
19	18	02/01/01 03:35:31	2.9
20	19	02/01/01 03:35:32	3.2

Apply for Graph

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




No.s	Date Time	W/(M)2
1	02/01/01 03:35:14	3.0
2	02/01/01 03:35:15	2.8
3	02/01/01 03:35:16	3.2
4	02/01/01 03:35:17	3.1
5	02/01/01 03:35:18	3.2
6	02/01/01 03:35:19	3.0
7	02/01/01 03:35:20	3.0
8	02/01/01 03:35:21	2.9
9	02/01/01 03:35:22	3.3
10	02/01/01 03:35:23	3.2
11	02/01/01 03:35:24	3.3
12	02/01/01 03:35:25	3.3
13	02/01/01 03:35:26	3.2
14	02/01/01 03:35:27	3.1
15	02/01/01 03:35:28	2.8
16	02/01/01 03:35:29	2.9

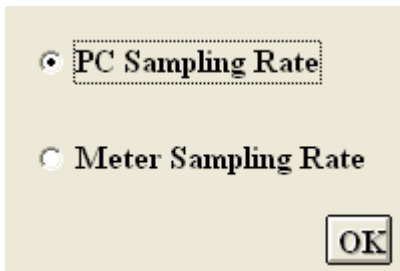


■ Sampling Time

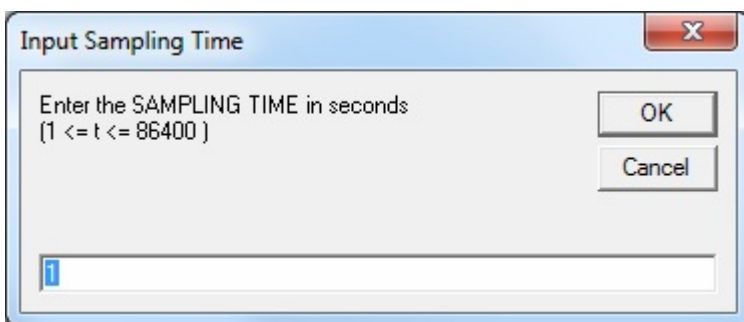
PC Sampling Rate:

(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.

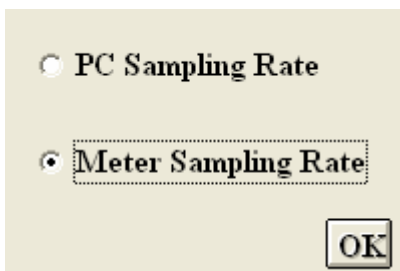


Input a sampling time and then click "OK" button to confirm.

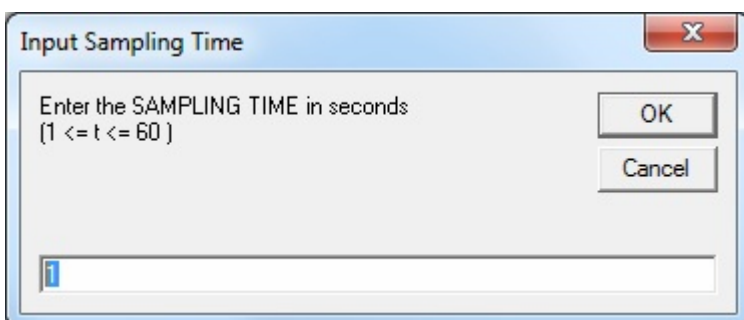
Meter Sampling Rate:

(rate at which meter stores readings)

Click  on the **Menu Bar**.




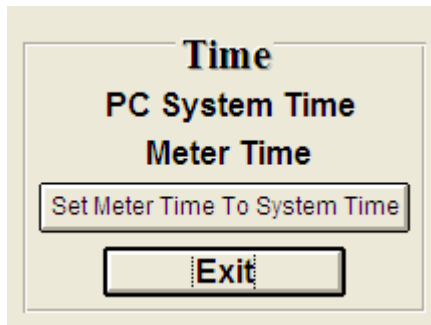
Choose "PC Sampling Rate" and then click "OK" button.



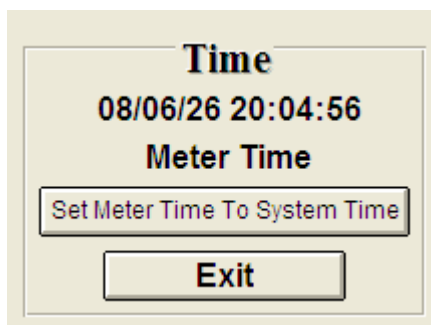
Input a sampling time and then click "OK" button to confirm.


■ 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.

