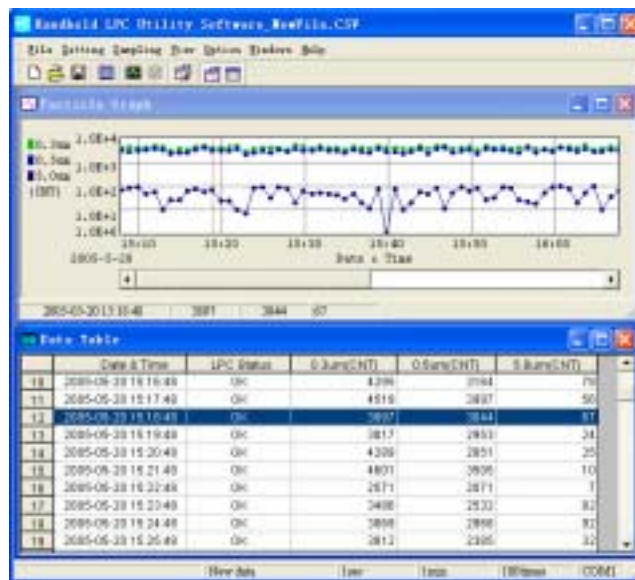




Handheld LPC Utility Software for Windows MODEL S388-70

Operation Manual



Read this manual carefully and understand the warnings described in this manual before operating the product.

Keep this manual handy for future reference.



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2006.06

NOTICE:

1. The copyright of this software belongs to Kanomax Instrument (Shenyang) Ltd.
2. Any unauthorized duplication of the product, in whole or in part, without written consent from Kanomax Inc. is strictly prohibited.
3. Purchase of one set of software per computer is required.
4. Contents of the Operation Manual are subject to change without notice.

Table of Contents

1. Connecting the Handheld LPC with a Computer.....	1
1.1 Handheld LPC Setting.....	1
1.2 Connecting with a Computer.....	2
1.3 Software Operating Requirements.....	3
2. Software Installation.....	4
3. Program Startup.....	6
3.1 Particle Graph.....	7
3.2 Data Table.....	7
4. File.....	9
4.1 Creating a New Data File.....	10
4.2 Opening a File.....	11
4.3 Saving a Data File.....	12
4.4 Opening a History File.....	13
4.5 Exit.....	13
5. Communication Setting.....	14
5.1 Setting RS232C COM Port.....	14
6. Set, Start and Stop Sampling.....	16
6.1 Set and Start Sampling.....	16
6.2 Screen while Sampling.....	18
6.3 Stop Sampling.....	19
7. View Settings.....	20
7.1 Graph Display Settings.....	21
7.2 Display/Hide Graph.....	22
7.3 Display/Hide Data Table.....	24
7.4 Display/Hide Status Bar.....	26
7.5 Display/Hide Toolbar.....	28
8. Option.....	30
9. Help.....	32
9.1 Version Information.....	32

1. Connecting the Handheld LPC with a Computer

This Software Operation Manual describes the method of connecting the Handheld Laser Particle Counter (LPC) with a personal computer (hereinafter “computer”) by using a communication cable (model 3887-08) and performing a remote control measurement.

The measurement data collected by remote control is stored in a format of Microsoft Office Excel (*.CSV) document.

1.1 Handheld LPC Setting

To perform a remote control measurement, the Handheld LPC must be set to Remote Mode.

The following describes the procedure for setting the instrument to Remote Mode.

Display Screen	Key Operation	Description
	POWER	Turn on the power by pressing the POWER key.
	ENTER	Proceed to the <MODE> screen by pressing the ENTER key.
	▲▼ ENTER	Select “5. REMOTE” by using the ▲▼ key, and press the ENTER key.
	▲▼ ENTER	Switch “NO” to “OK” by using the ▲▼ key, and press the ENTER key.
		Use the Utility Software to confirm the connection with the instrument. Note: Time and data displayed on the instrument screen during remote control measurement are for reference only. They are different from the actual data transferred to the computer.

Fig. 1-1 Instrument Setting

[Caution]

When communication with the computer cannot be made, please confirm the followings.

- 1) Confirm that the ID number of the instrument is set to “00”.
[MENU] → [3.OPTIONS] → [3.UTILITIES] → [3.ID 00 (MAX31)]
- 2) Confirm that the communication mode of the instrument is set to “RS232C”.
[MENU] → [3.OPTIONS] → [3.UTILITIES] → [4.COMMUNICATION]
(If setting is “RS485”, change it to “RS232C”).

1.2 Connecting with a Computer

Connect the instrument with a 9 pin COM port of the Computer.

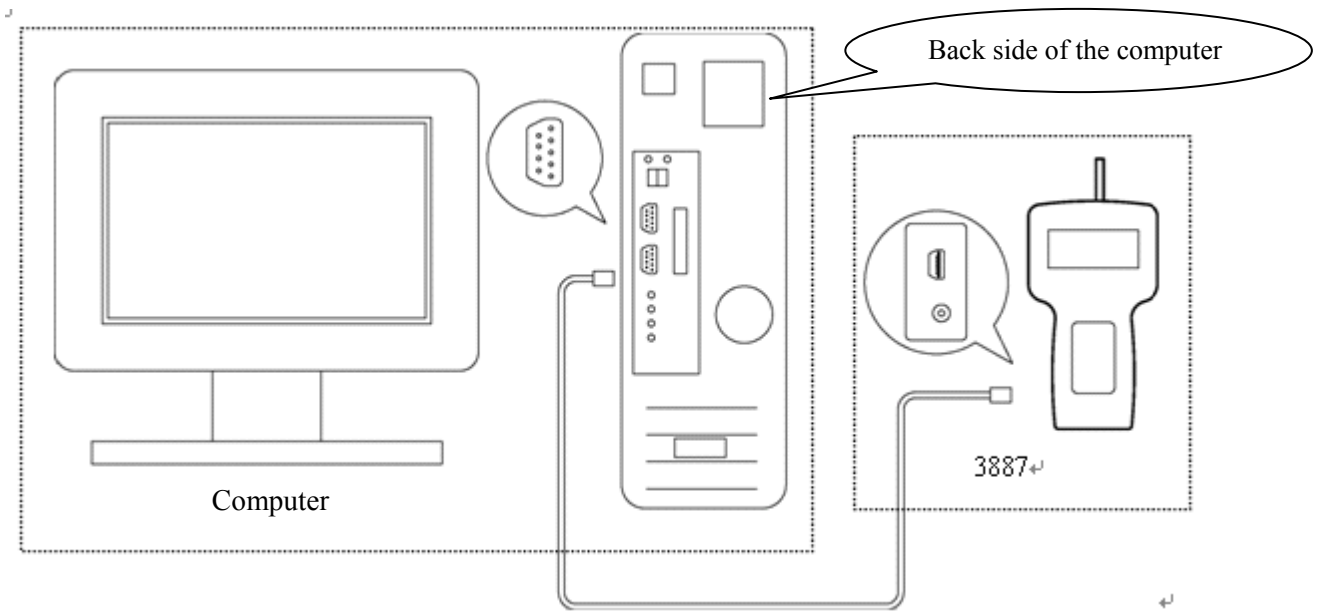


Fig. 1-2 Hardware Connection Diagram

1.3 Software Operating Requirements

Item	Condition	
OS	Microsoft Windows 2000 Professional Microsoft Windows XP Home Edition Microsoft Windows XP Professional	
Language	English or Japanese	
Communication Setting	Items	Condition
	COM port	COM1 to COM8

Operating Requirements:


CPU	Pentium-4 300MHz or higher
Interface	COM port × 1
Operating System	Microsoft Windows 2000 Professional, Microsoft Windows XP Home Edition, or Microsoft Windows XP Professional
Memory Capacity	128MB or more
Required HDD Capacity	50MB or more
Display	Resolution of 800*600 or higher, 32 colors

[Caution]

Please note that this software is provided exclusively for the Handheld LPC (Model 3887).

2. Software Installation

1) Before installing the software, shut down (exit) all operating application programs.

Insert the installation CD into the CD-ROM drive, select the “Handheld LPC Utility Software” folder, and double click the installation icon  “Setup.exe”.

(Note: If an old version of this software is already installed in the computer, please make sure to uninstall the old version before installing the new version.)

2) After a few seconds, the installation will start automatically, and the window shown in Fig. 2-1 will be displayed.

Click the “OK” button to proceed to the installation window shown in Fig. 2-2.



Fig. 2-1

3) The following window is to confirm the destination directory to save the software. To proceed with the default directory, click the installation starting icon.

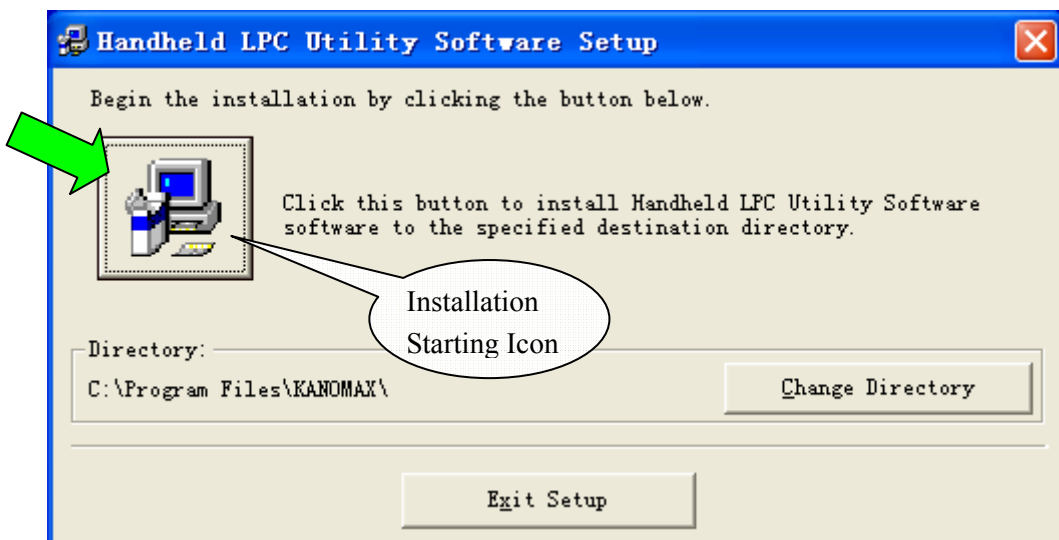


Fig. 2-2

4) Select the Program Group for installing the software. By default, a program group called “Kanomax” will be created. To proceed with the default setting, click the “Continue” button, and the installation will start.

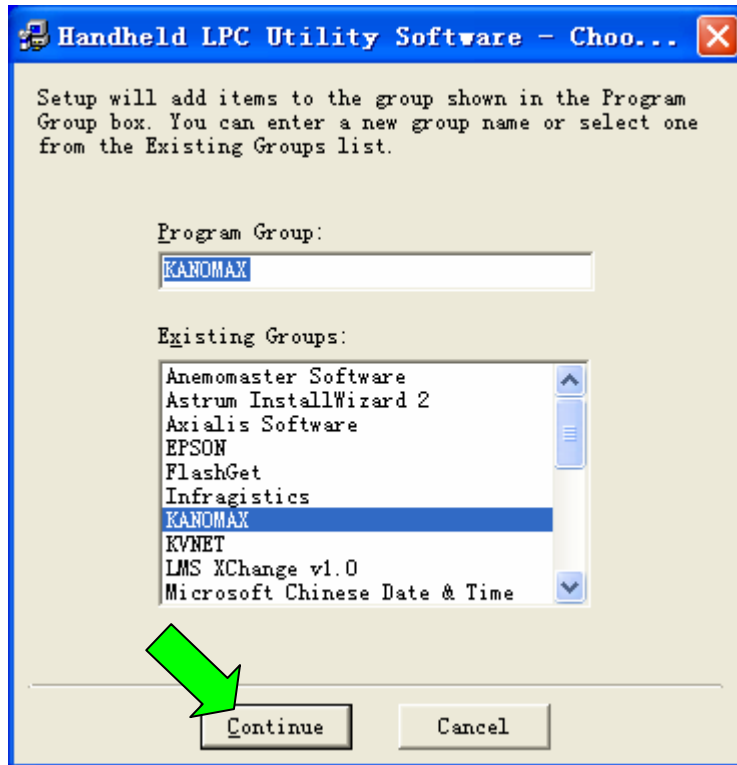


Fig. 2-3

5) The following window will be displayed while the installation is in progress.

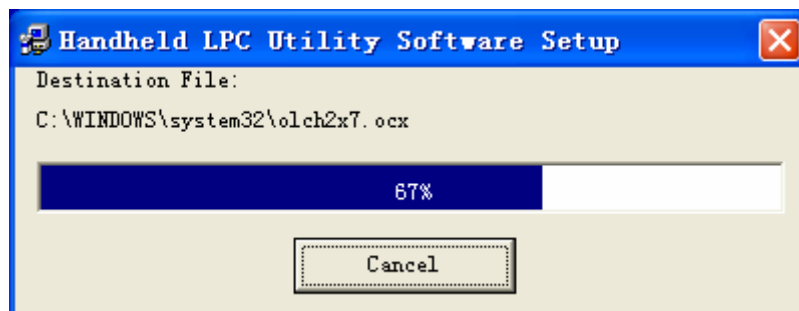


Fig. 2-4

6) When installation is completed properly, the following window will be displayed. Click the “OK” button to close the window.

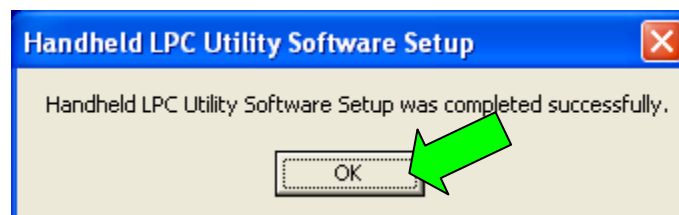


Fig. 2-5

3. Program Startup

To start the program, select: [Start] → [All Programs] → [KANOMAX] → [Handheld LPC Utility Software]. The program will start on clicking the [Handheld LPC Utility Software].

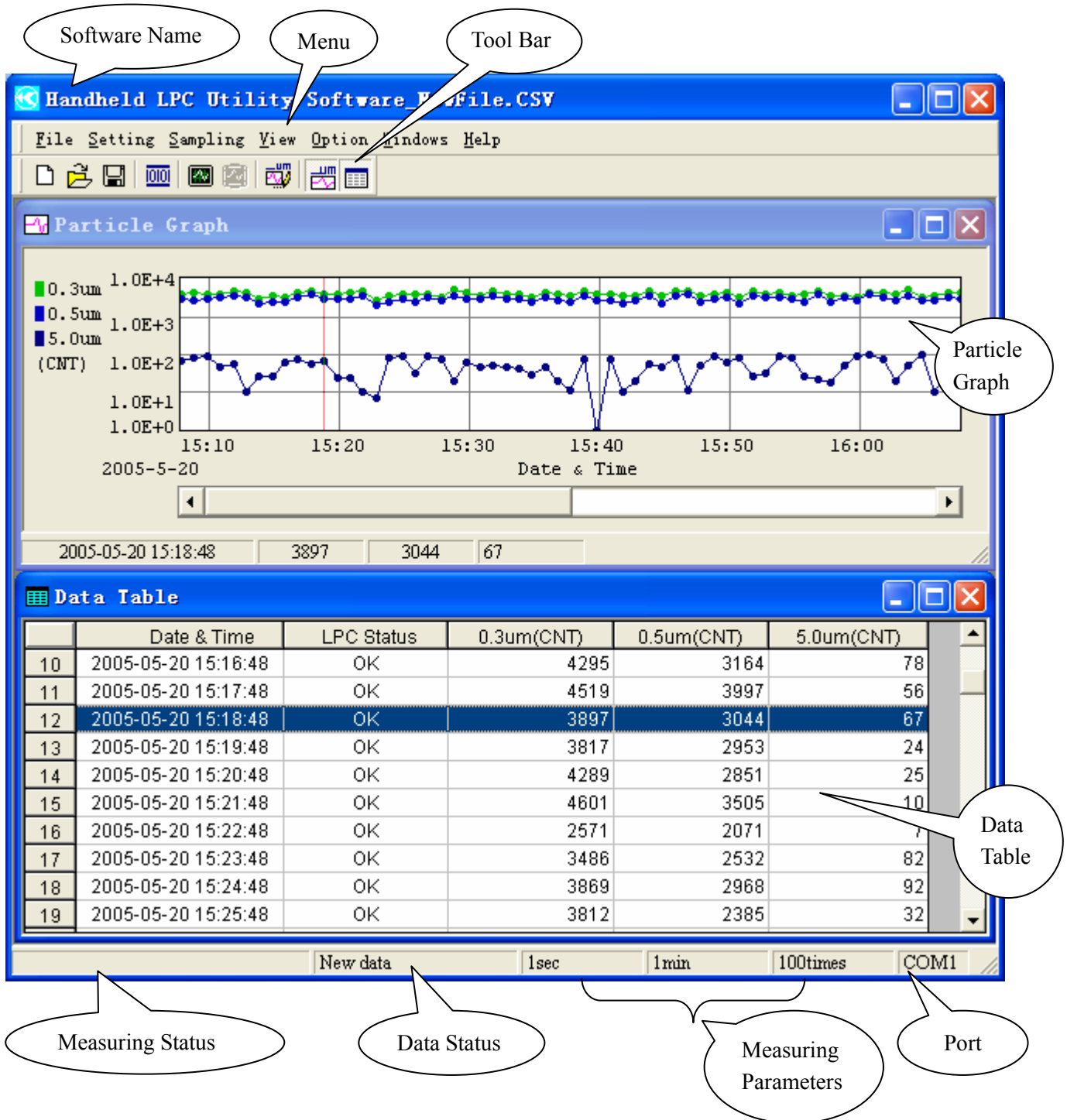


Fig. 3-1 Main Window

Description:

Particle Graph: Displays the measured particle data in a graph.

Data Table: Displays the measured particle data in a table.

Status Bar: Displays the following statuses.

Item	Status
Measuring Status	Sampling / Wait
Data Status	New Data / Previous Data
Measuring Parameter	Sampling Time / Sampling Interval
Port	COM1, COM2..... COM8

3.1 Particle Graph

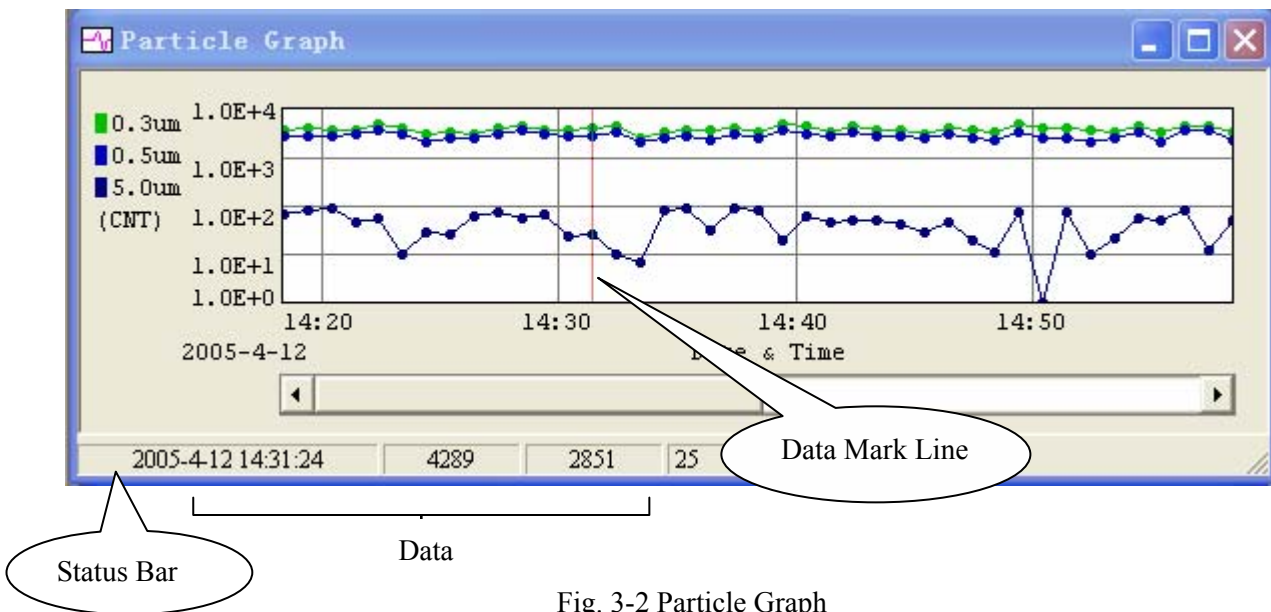


Fig. 3-2 Particle Graph

3.2 Data Table

	Date & Time	LPC Status	0.3um(CNT)	0.5um(CNT)	5.0um(CNT)
1	2005-05-20 15:30:52	OK	3772	2971	70
2	2005-05-20 15:31:52	OK	4111	2749	81
3	2005-05-20 15:32:52	OK	3980	2956	87
4	2005-05-20 15:33:52	OK	3876	3113	46
5	2005-05-20 15:34:52	OK	4875	3680	58
6	2005-05-20 15:35:52	OK	4275	3200	10
7	2005-05-20 15:36:52	OK	3050	2250	28
8	2005-05-20 15:37:52	OK	3405	2495	27
9	2005-05-20 15:38:52	OK	3119	2539	63
10	2005-05-20 15:39:52	OK	4295	3164	78
11	2005-05-20 15:40:52	OK	4519	3997	56

Fig. 3-3 Data Table

Description:

- 1) The “Data Mark Line” on the graph specifies a given point in time.
- 2) On clicking the “Data Mark Line” on the graph, corresponding data will be displayed at the “Status Bar”, and the cursor in the “Data Table” will move to the corresponding data in the table.
- 3) On clicking the “Data Table”, the “Data Mark Line” will move to the corresponding position on the graph, and the corresponding data will be displayed at the “Status Bar”.

4. File

The file menu provides various operations such as; creating a new data file, opening a file, opening a history file, and closing the software.

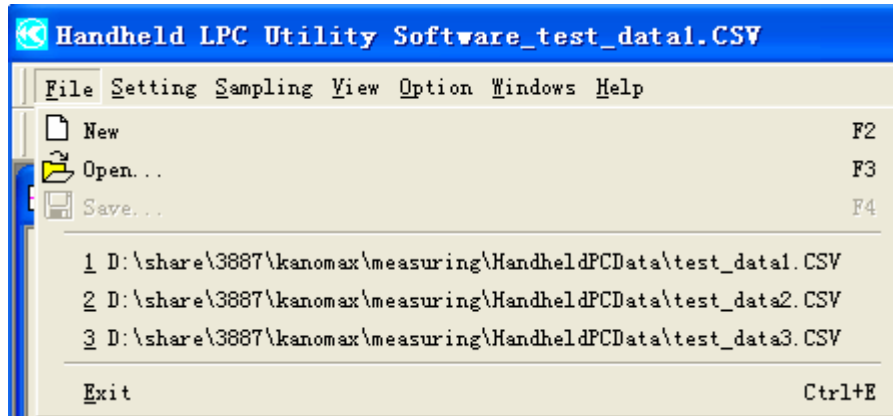




Fig. 4-1 File Menu

4.1 Creating a New Data File

To open a new window, perform any of the following procedures:

- 1) Click: [File] →  New F2
- 2) Click: 
- 3) Press the F2 key

A new window as shown below will open.

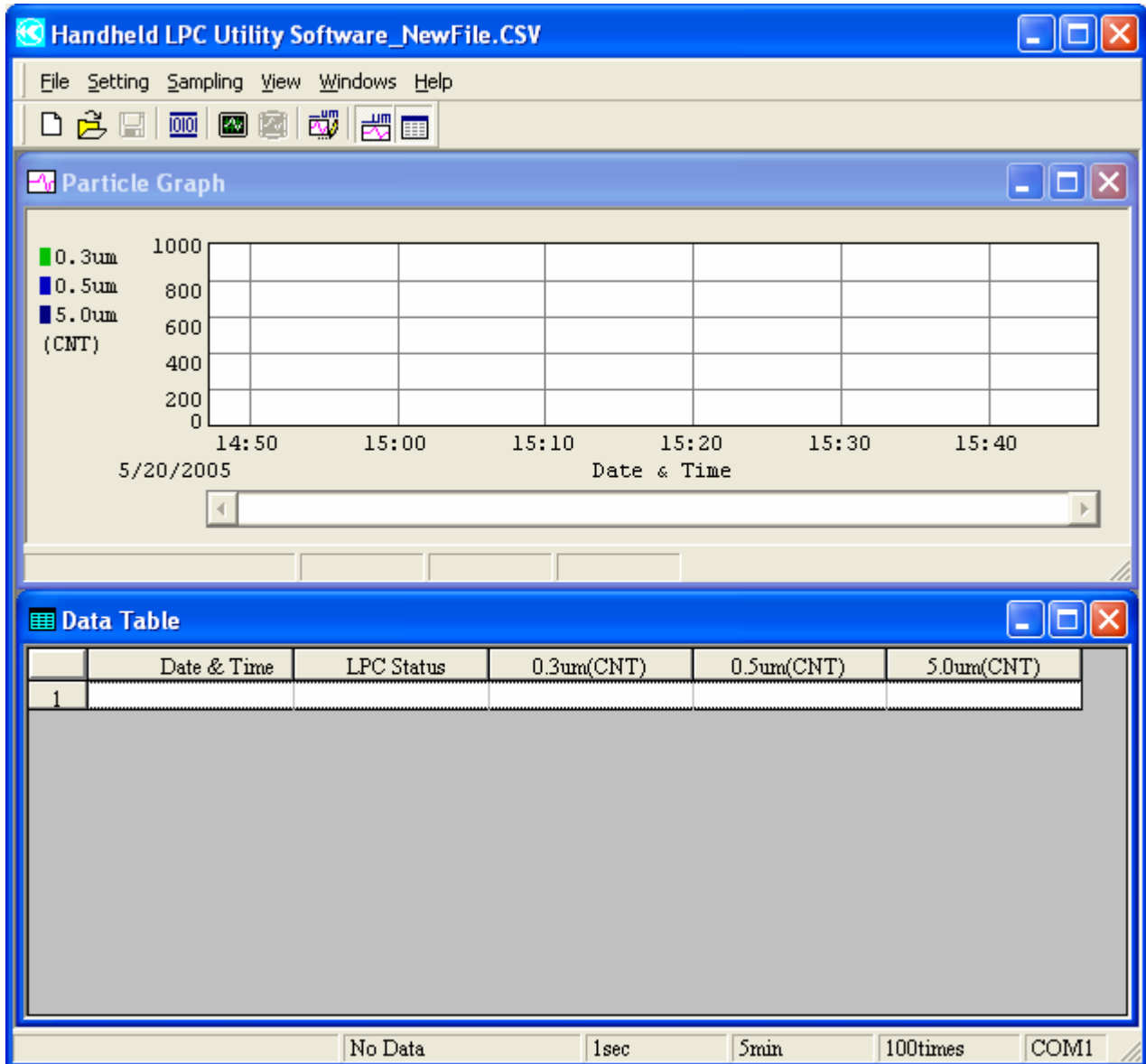




Fig. 4-2 Initialized Window

4.2 Opening a File

To open a stored measurement data file (*.CSV), and to display the measurement data (graph and data table), perform any of the following procedures:

- 1) Click: [File] →  Open... F3
- 2) Click: 
- 3) Press the F3 key

The following dialog box will open.

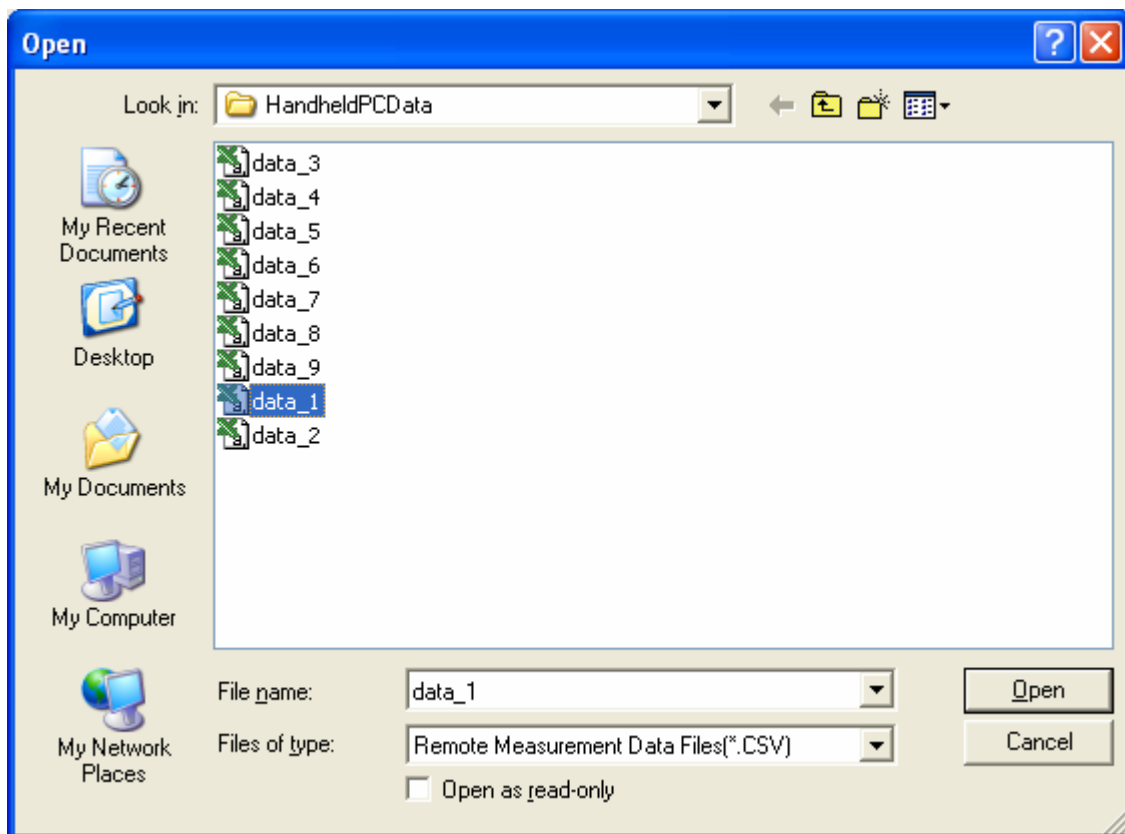
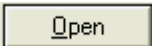
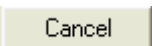




Fig. 4-3 File Opening Dialog Box

Command Button:

- | | |
|---|--|
|  | : To open a data file. |
|  | : To exit without opening a data file. |

4.3 Saving a Data File

To save the measurement parameters and measurement data, perform any of the following procedures:

- 1) Click: [File] →  Save... F4
- 2) Click: 
- 3) Press the F4 key

The following dialog box will open.

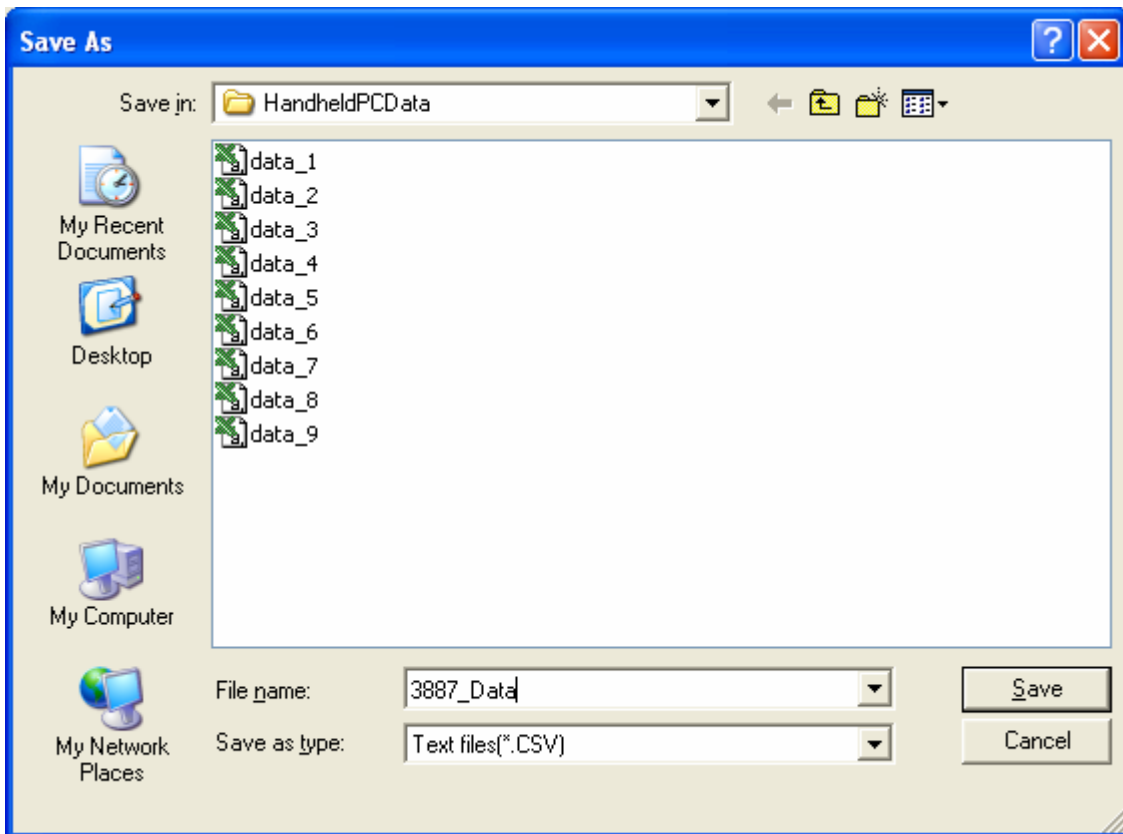




Fig. 4-4 File Saving Dialog Box

Command Button:

-  : To save the data file.
-  : To exit without saving the data file.

4.4 Opening a History File

As shown in Fig. 4-5, the most recently saved data files, up to 8 files in maximum, will be displayed on the file menu (path and file name of the data files). The listed data files can be opened by clicking on the desired data file in the list.

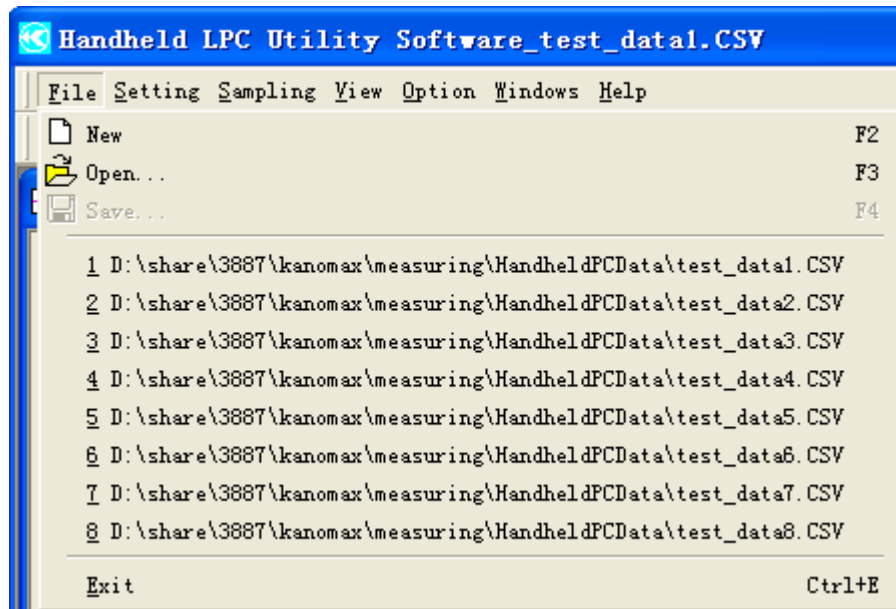


Fig. 4-5 Opening a History File

4.5 Exit

To shut down (exit) the software: Click: [File] →

Exit	Ctrl+E
------	--------

5. Communication Setting

To enable communication between the Handheld LPC and the computer, the RS232C COM port must be set.

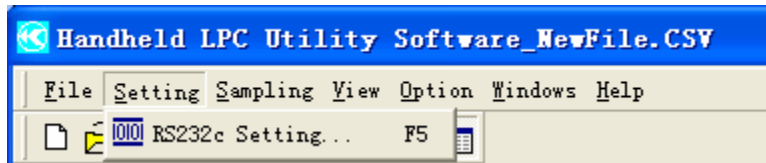


Fig. 5-1 Setting Menu

5.1 Setting RS232C COM Port

To set the RS232C COM port, perform any of the following procedures:

- 1) Click: [Setting] → RS232c Setting... F5
- 2) Click: RS232c Setting...
- 3) Press the F5 key

The following RS232C Setting dialog box will open

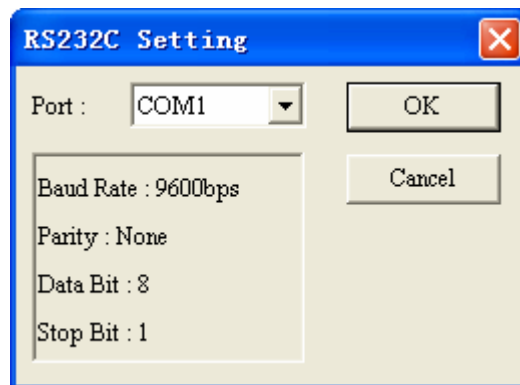


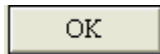
Fig. 5-2 RS232C Setting Dialog Box

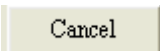
Caution: Select the COM port number which corresponds to the RS-232C port number of your computer.

1) Parameter Settings

Item	Setting	Remarks
Port	COM1, COM2 COM8	Select
Baud Rate	9600bps	Fixed
Parity Bit	No	Fixed
Data Bit	8	Fixed
Stop Bit	1	Fixed

2) Command Button

 : To save the parameter settings.

 : To exit without saving the parameter settings.

6. Set, Start and Stop Sampling

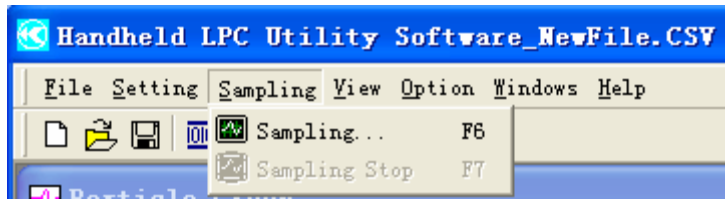




Fig. 6-1 Sampling Menu

6.1 Set and Start Sampling

To enter the sampling settings, perform any of the following procedures:

- 1) Click: [Sampling] →  Sampling... F6
- 2) Click: 
- 3) Press the F6 key

The following Sampling Parameter Setting dialog box will be displayed.

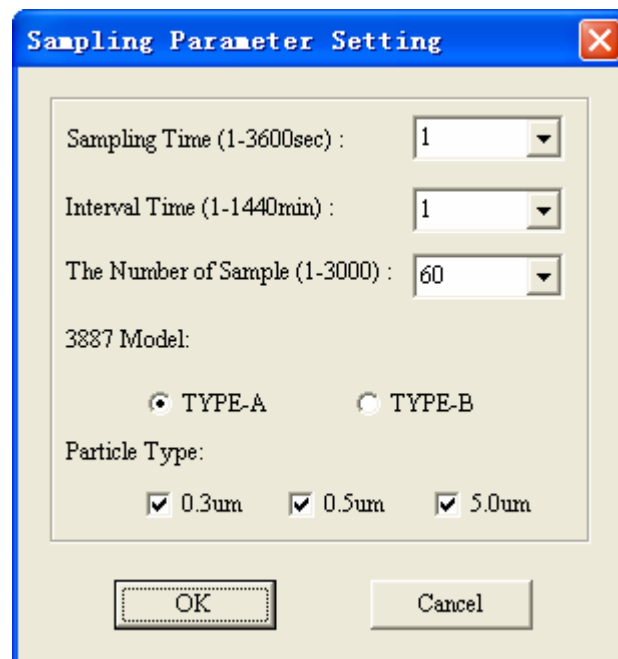
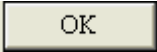


Fig. 6-2 Sampling Setting Dialog Box

1) Parameters Settings

Item	Setting	Remarks
Sampling Time	10 to 3600 seconds	Select or input
Interval Time	1 to 1440 minutes	Select or input
The Number of Sample	1 to 3000	Select or input
3887 Model	Type-A or Type-B	Select
Particle Type	Type-A: 0.3 μ m, 0.5 μ m, 5.0 μ m	Particle size can be selected from three (3) sizes. At least one must be selected. At maximum, three (3) sizes can be selected.
	Type-B: 0.3 μ m, 0.5 μ m, 1.0 μ m	

2) Command Button

 : To save the settings and start sampling.

 : To cancel sampling without saving the settings.

6.2 Screen while Sampling

The following window will be displayed while sampling.

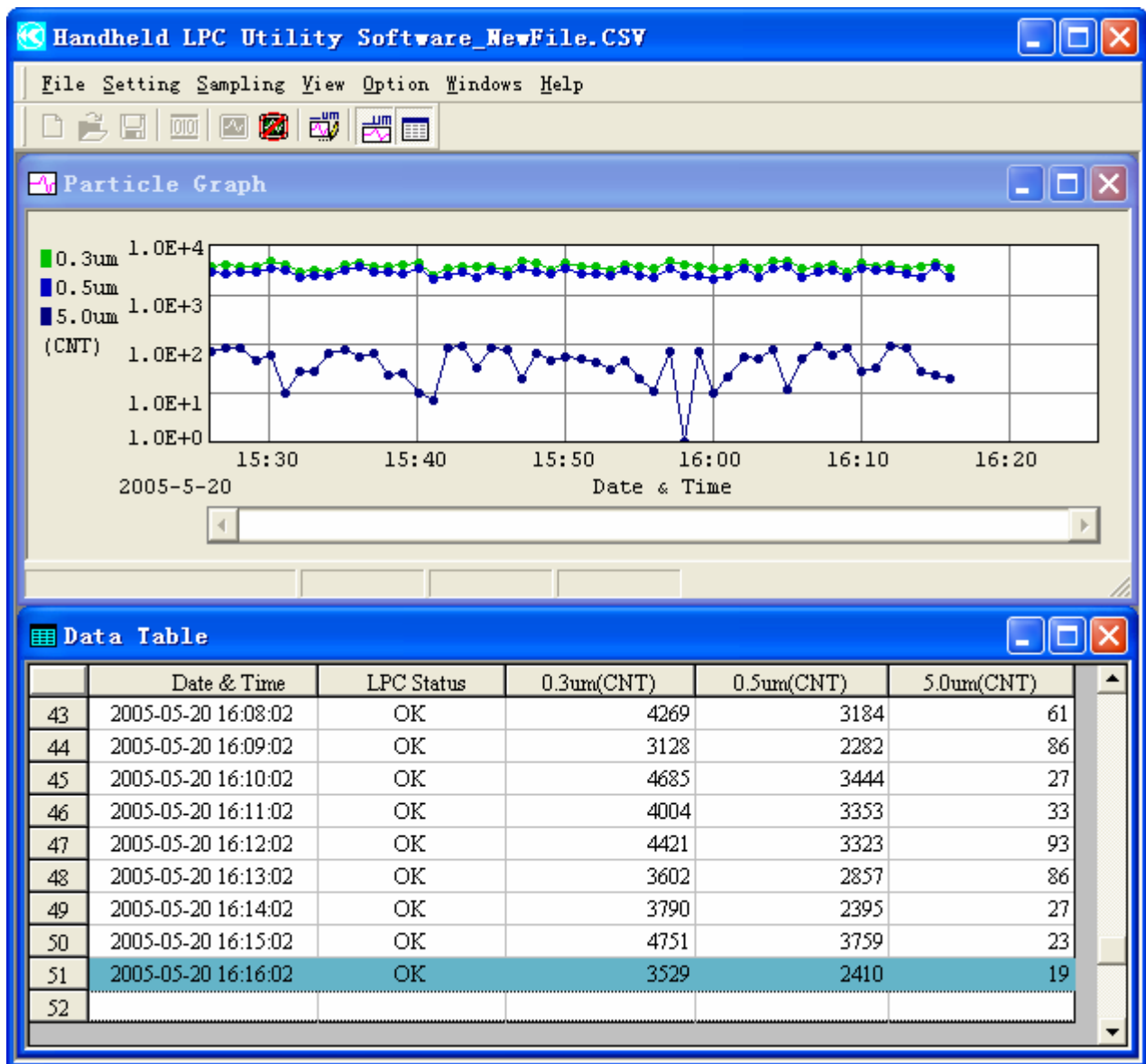
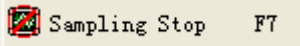



Fig. 6-3 Window While Sampling

6.3 Stop Sampling

To stop sampling, perform any of the following procedures:

- 1) Click: [Sampling] →  Sampling Stop F7
- 2) Click: 
- 3) Press the F7 key

The following dialog box will be displayed asking whether you want to stop sampling.

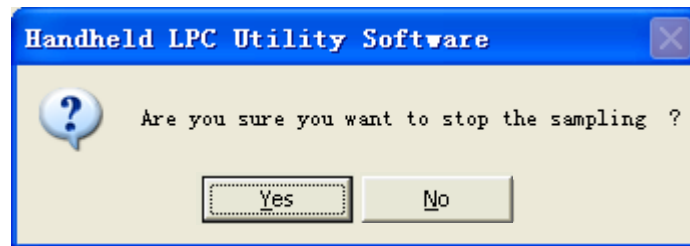
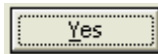
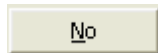


Fig. 6-4 Sampling Stop Confirmation Dialog Box

Command Button:



: To stop sampling.



: Do not stop sampling, and continue with the sampling as set.

7. View Settings

From the View menu, view settings of the graph can be made, and graph, data table, status bar, and toolbar can be switched between display/hide.

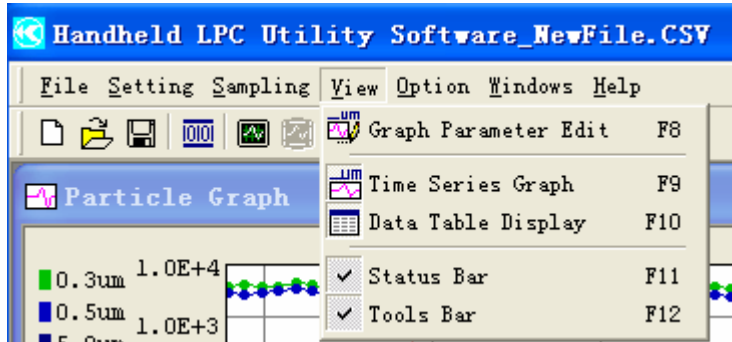



Fig. 7-1 View Menu

7.1 Graph Display Settings

To enter the graph display settings, perform any of the following procedures:

- 1) Click: [View] →  Graph Parameter Edit F8
- 2) Click: 
- 3) Press the F8 key

The following Particle Graph Setting dialog box will be displayed.

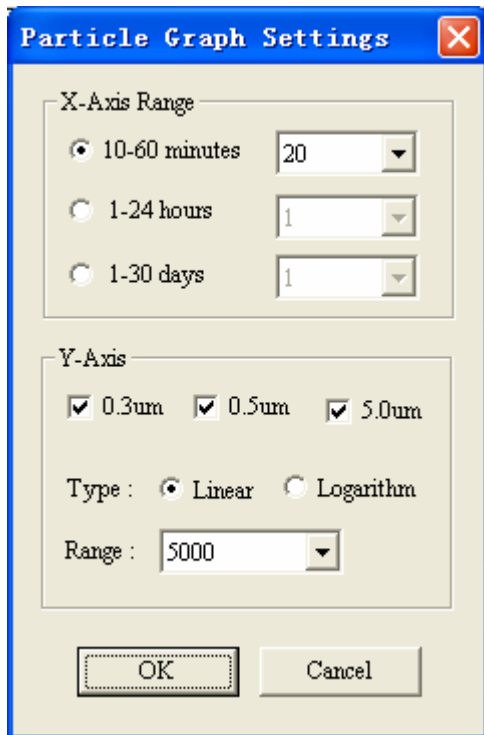
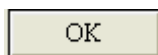


Fig. 7-2 Particle Graph Setting Dialog Box

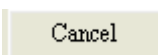
1) Parameter Settings

Item	Setting	Remarks
X-Axis Range	Minutes (10 to 60)	10, 20, 30, 40, 50, 60
	Hours (1 to 24)	1, 2, 3 24
	Days (1 to 30)	1, 2, 3, 4 30
Particle Size Display	TYPE-A	0.3 μ m, 0.5 μ m, 5.0 μ m
	TYPE-B	0.3 μ m, 0.5 μ m, 1.0 μ m
Scale Type	Linear / Logarithm	
Vertical Axis Range	Linear / Logarithm	10, 20, 50, 100 1.00E+9

2) Command Button





: To save the input settings, and display the graph according to the settings.



: To exit without saving the input settings.

7.2 Display/Hide Graph

1) To display a graph, perform any of the following procedures:

- (1) Click: [View] →  Time Series Graph F9
- (2) Click: 
- (3) Press the F9 key

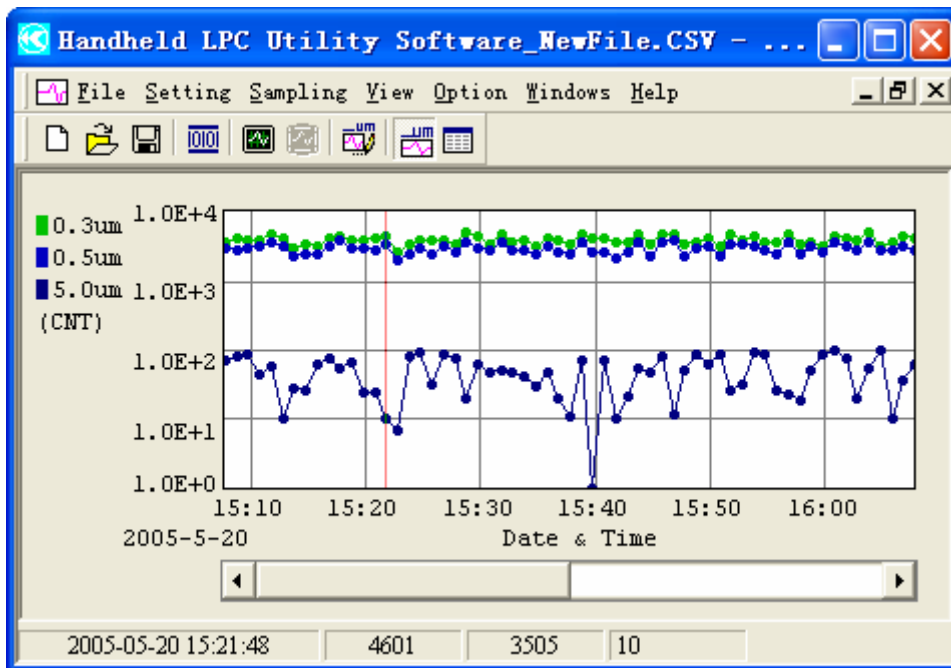




Fig. 7-3 Window Displaying a Graph

2) To hide the graph, perform any of the following procedures.

- (1) Click: [View] →  Time Series Graph F9
- (2) Click: 
- (3) Press the F9 key

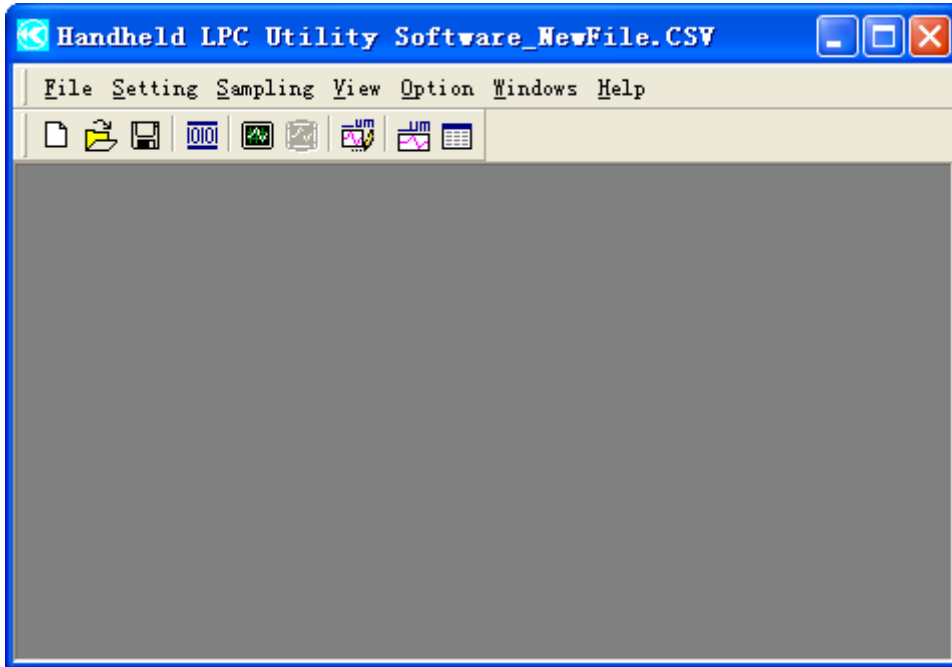


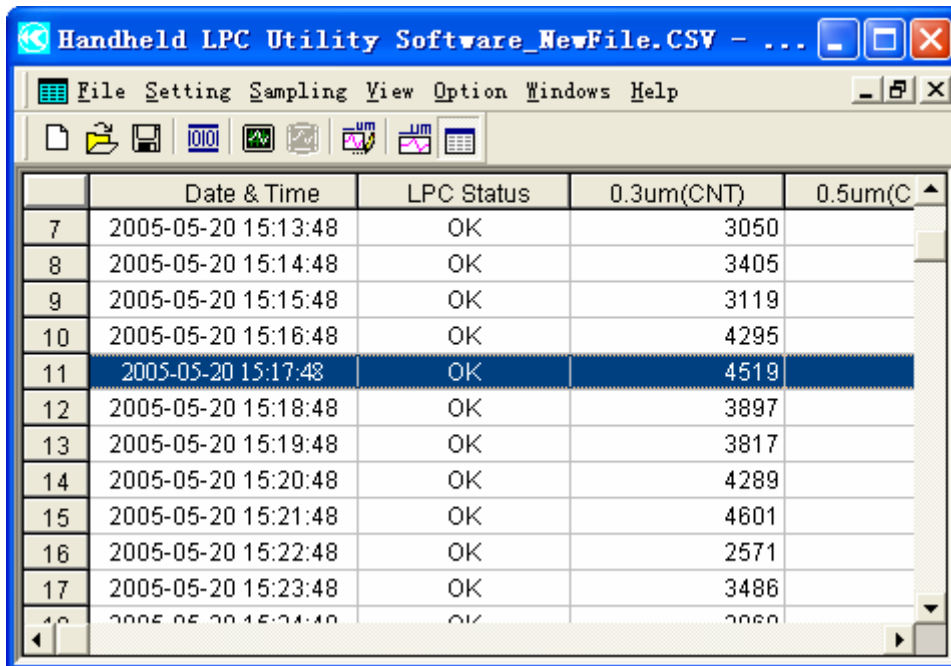


Fig. 7-4 Window Not Displaying a Graph

7.3 Display/Hide Data Table

1) To display a Data Table, perform any of the following procedures:



- (1) Click: [View] →  Data Table Display F10
- (2) Click: 
- (3) Press the F10 key



	Date & Time	LPC Status	0.3um(CNT)	0.5um(C)
7	2005-05-20 15:13:48	OK	3050	
8	2005-05-20 15:14:48	OK	3405	
9	2005-05-20 15:15:48	OK	3119	
10	2005-05-20 15:16:48	OK	4295	
11	2005-05-20 15:17:48	OK	4519	
12	2005-05-20 15:18:48	OK	3897	
13	2005-05-20 15:19:48	OK	3817	
14	2005-05-20 15:20:48	OK	4289	
15	2005-05-20 15:21:48	OK	4601	
16	2005-05-20 15:22:48	OK	2571	
17	2005-05-20 15:23:48	OK	3486	
18	2005-05-20 15:24:48	OK	3000	

Fig. 7-5 Window Displaying a Data Table

2) To hide the Data Table, perform any of the following procedures:

- (1) Click: [View] →  Data Table Display F10
- (2) Click: 
- (3) Press the F10 key

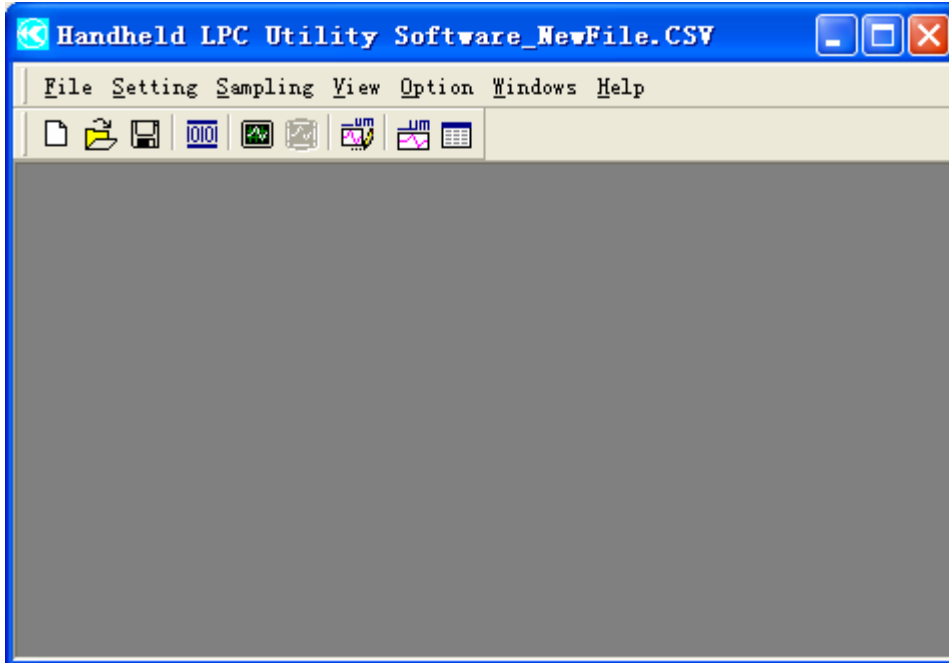
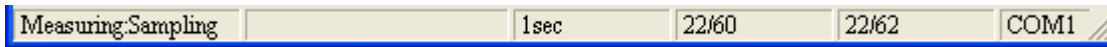


Fig. 7-6 Window Not Displaying a Data Table

7.4 Display/Hide Status Bar

The Status Bar displays the measuring status, measuring parameter, and baud rate.



1) To Display the Status Bar, perform any of the following procedures:

- (1) Click: [View] → **Status Bar** **F11**
- (2) Press the F 11 key

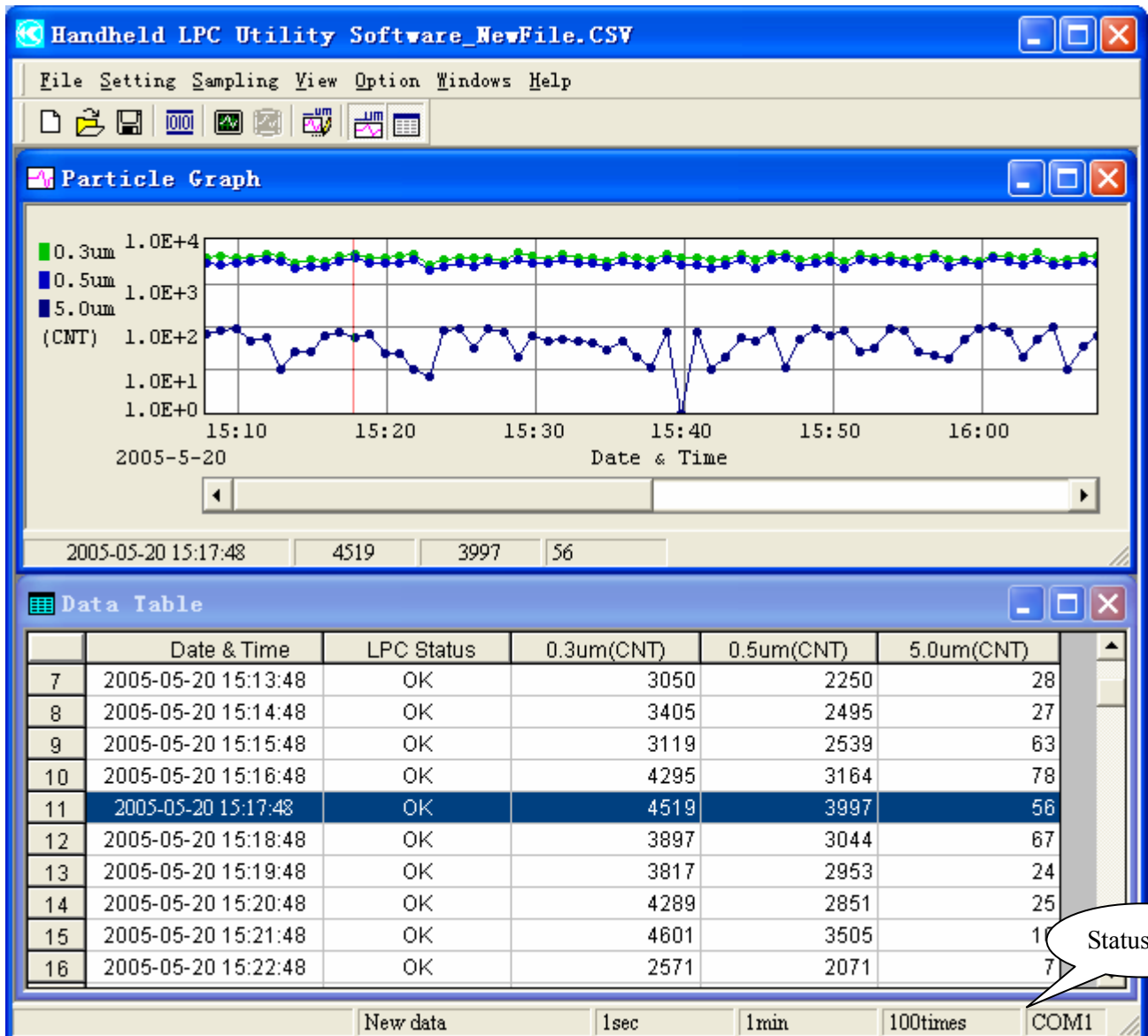


Fig. 7-7 Window Displaying the Status Bar

2) To hide the Status Bar, perform any of the following procedures:

- (1) Click: [View] → Status Bar F11
- (2) Press the F11 key

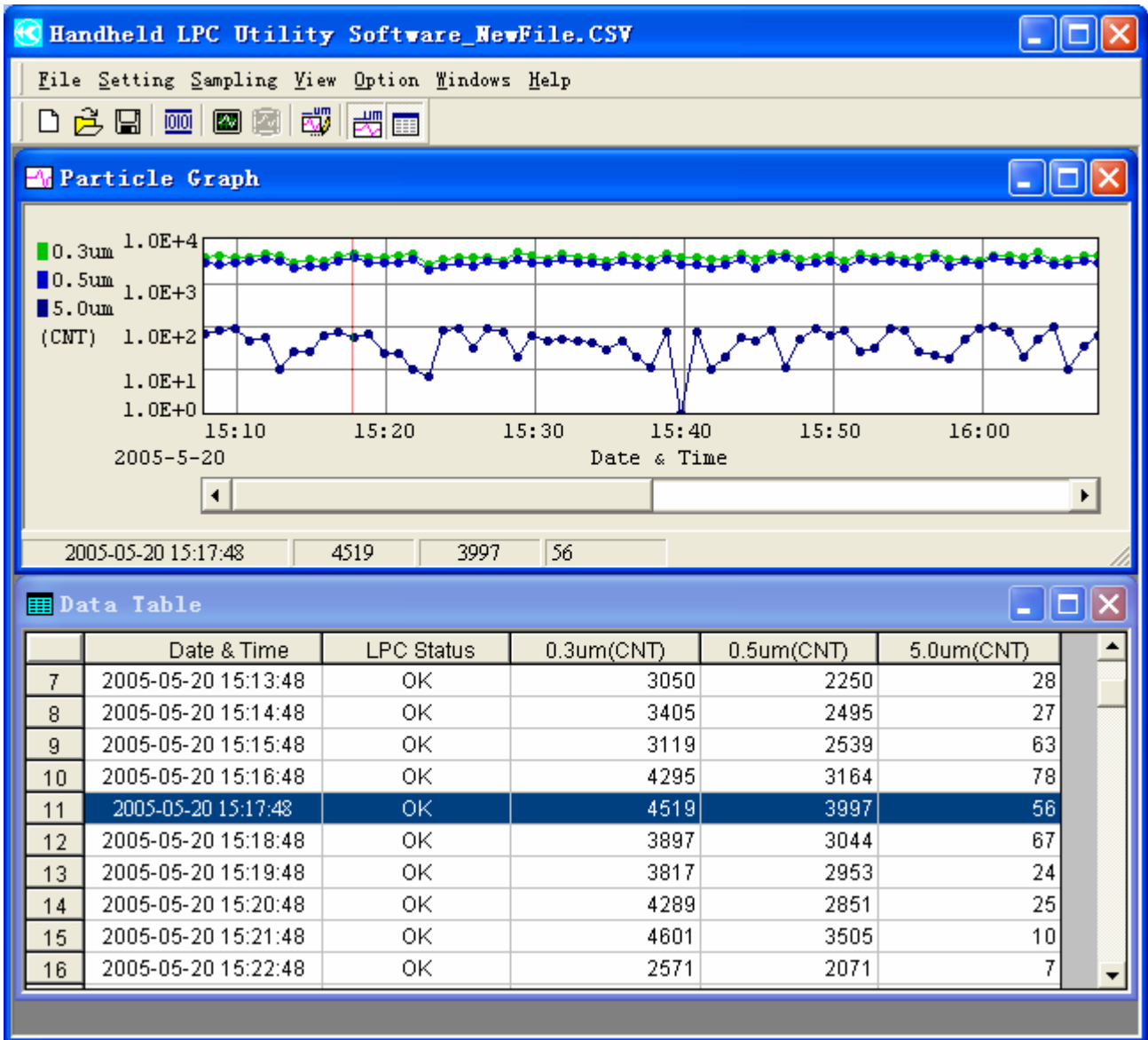
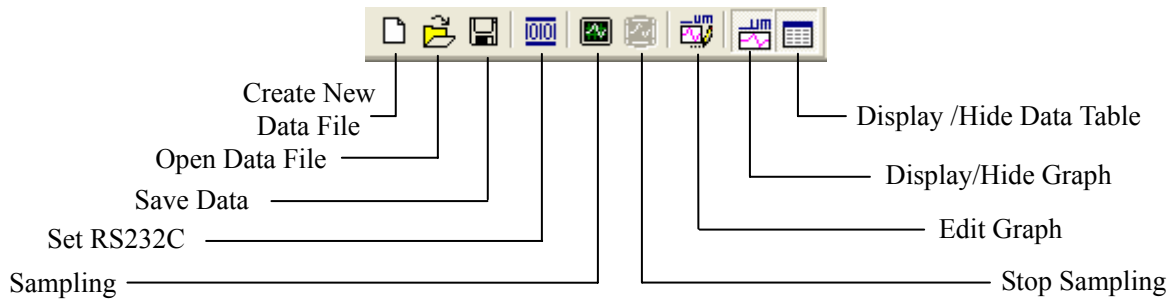


Fig. 7-8 Window Not Displaying the Status Bar

7.5 Display/Hide Toolbar



1) To display the toolbar, perform any of the following procedures:

- (1) Click: [View] → **Tools Bar** **F12**
- (2) Press the F 12 key

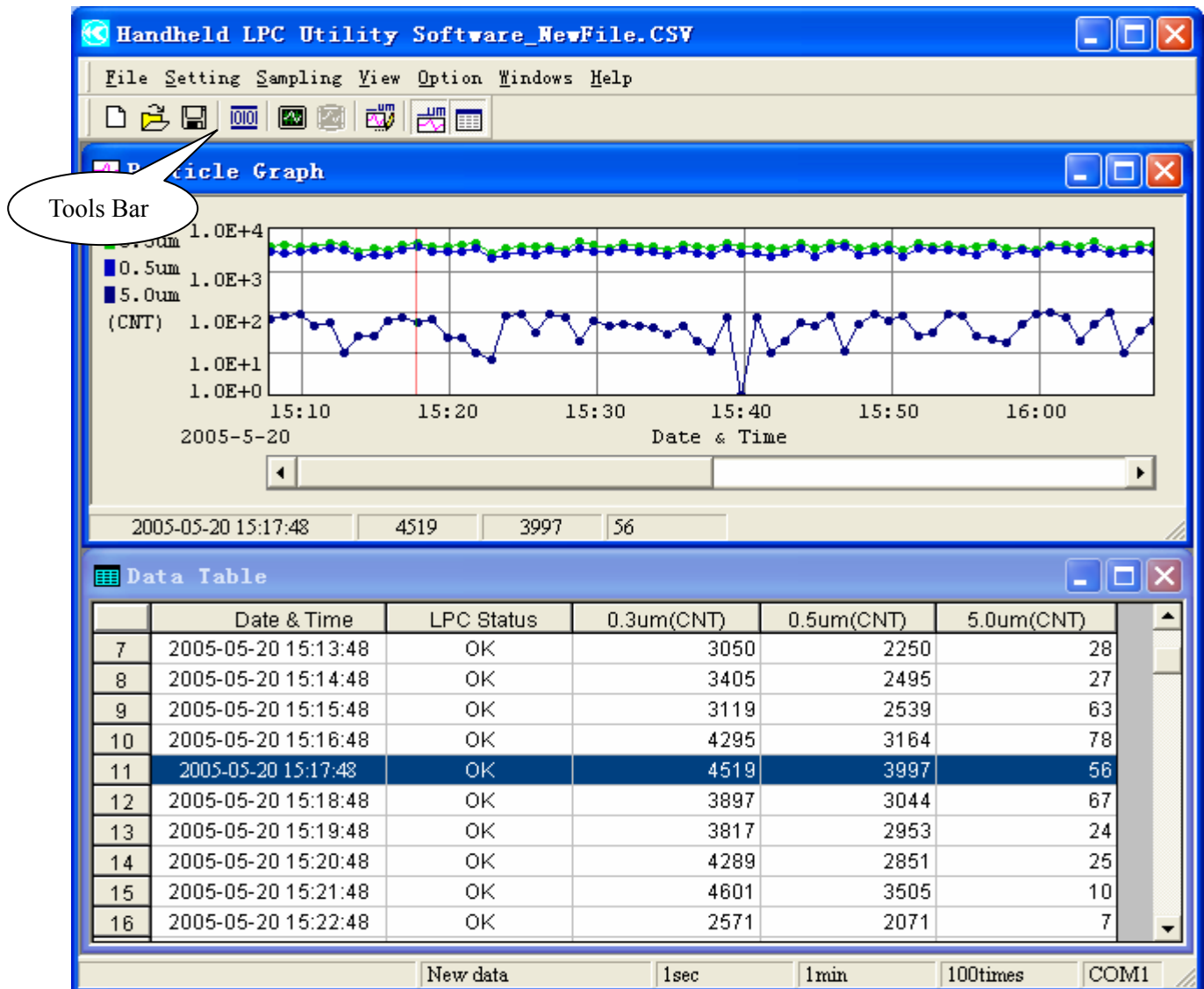


Fig. 7-9 Window Displaying the Toolbar

2) To hide the toolbar, perform any of the followings:

- (1) Click: [View] → Tools Bar F12
- (2) Press the F12 key

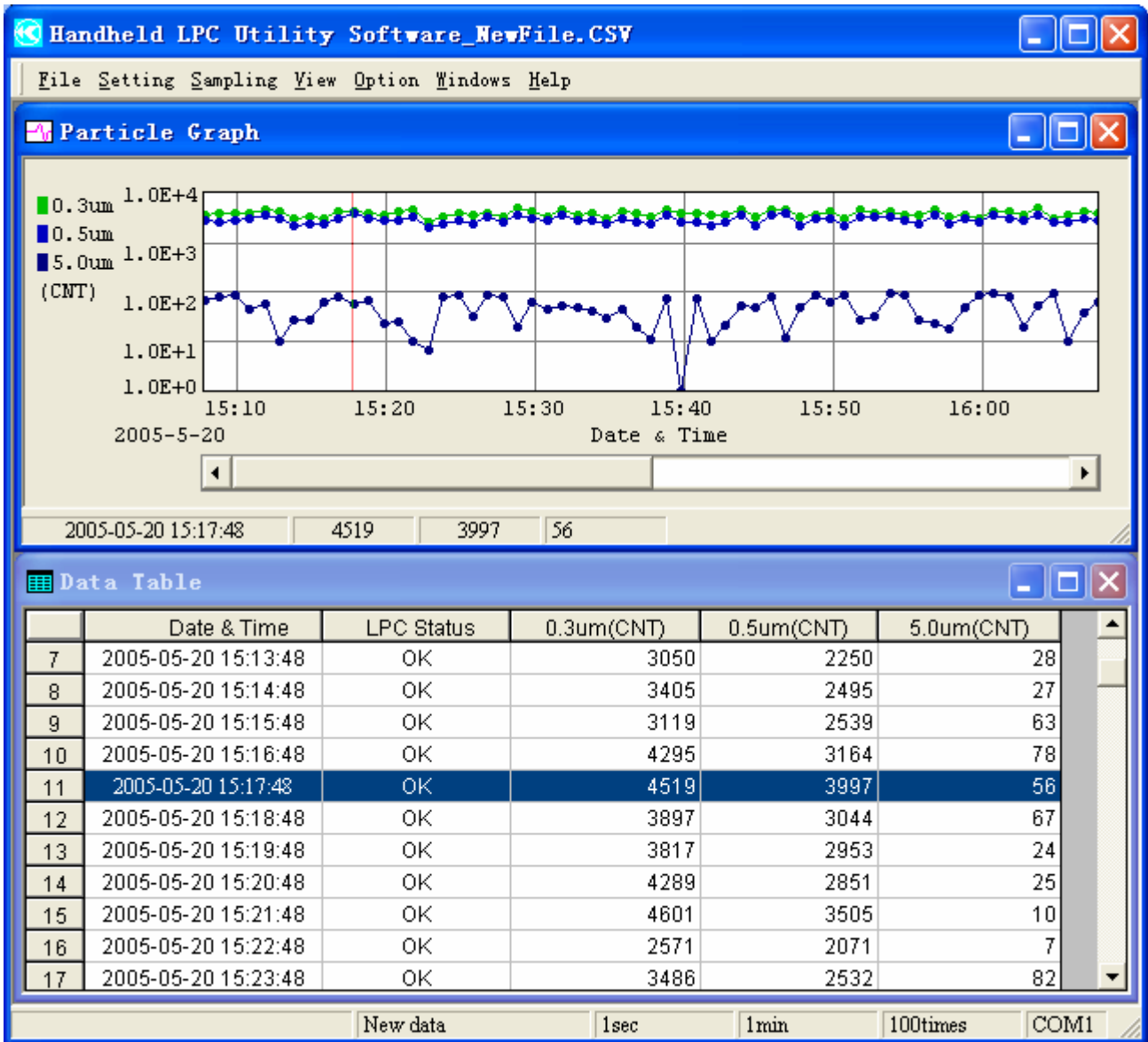


Fig. 7-10 Window Not Displaying the Tool Bar

8. Option

Display language can be selected from the Option menu.



Fig. 8-1 Display Language Menu

1) To Display in English

Click: [Option] → English and the window will be displayed in English.

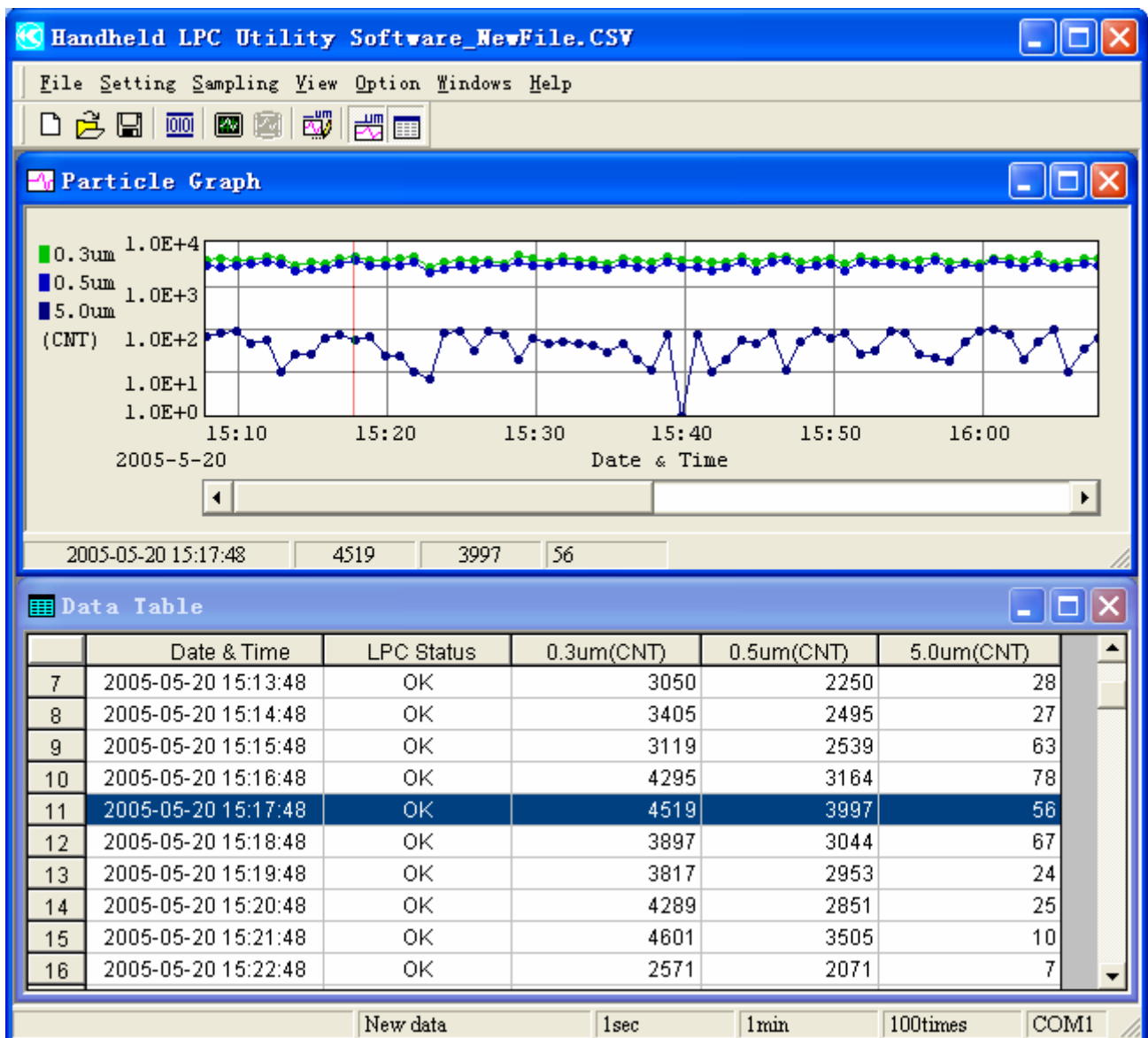


Fig. 8-2 Window Displayed in English

2) To Display in Japanese:

Click: [Option] → Japanese and the window will be displayed in Japanese.

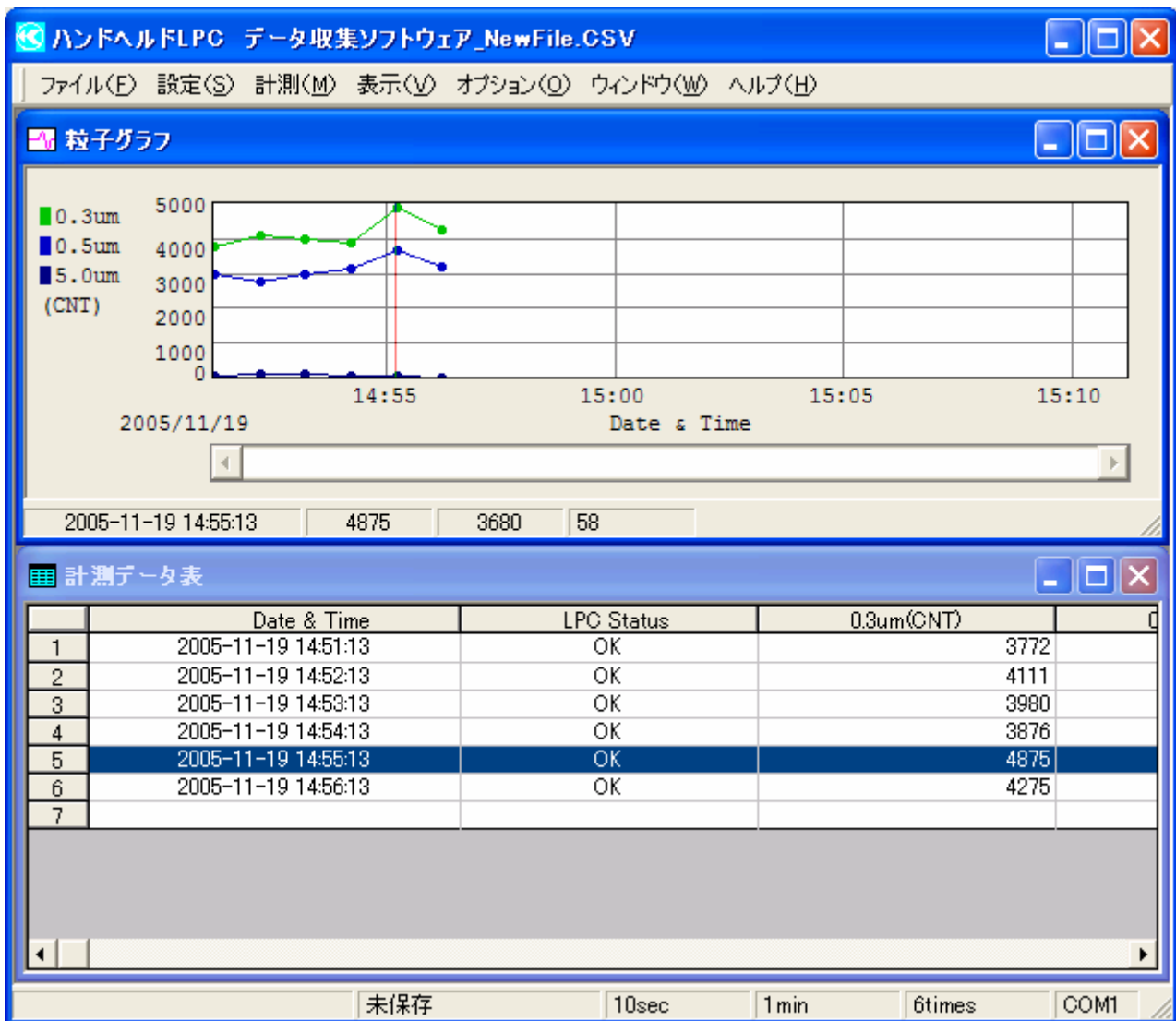


Fig. 8-3 Window Displayed in Japanese

9. Help

Information such as software name, version number, and copyright can be displayed from the Help menu.

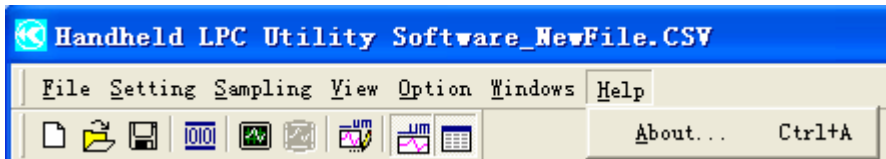



Fig. 9-1 Help Menu

9.1 Version Information

To display the software version information, click: [Help] → 

Note:

The version number shown below is just an example.
It may be different from your software version.

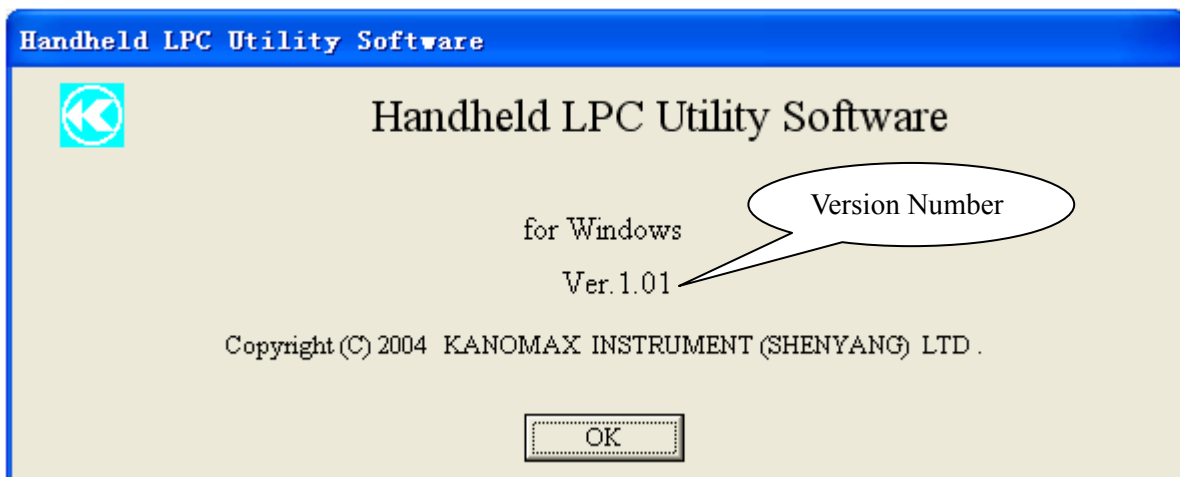


Fig. 9-2 Help Window

