OxiSensor Demonstrator and Data Logger

User Manual

Instructions to User

Dear Users,

Thank you very much for purchasing our product of smart SpO2 probe (OxiSensor). This manual is intended to assist the users to manage the data in a safe and effective manner by connecting the SpO_2 probe to PC. Please read this manual carefully before running the system, and follow it to operate.

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Version of this manual: Ver 1.3
Revised Date: December 17, 2015

This OxiSensor Demonstrator and Data Logger is application software running on a personal computer with Microsoft Windows operating system, so the user should be acquainted with some knowledge to operate computer.

3502-2320001

Information for operation

- Please make sure that the connection between the data cable and PC is reliable before measuring, and do not unplug the data cable at ease during measuring.
- While installing the printer driver, please quit the OxiSensor Demonstrator and Data Logger if it's running.
- It is recommended to set the computer for disabling it to enter dormancy, hard-disk stopping or stand-by state while measuring, or the data may not be stored normally.
- If there is no data displaying on the current management screen, then the user should plug out finger from the SpO_2 probe and insert it into the SpO_2 probe again for measuring.

Notes:

1. Connect/Disconnect data cable to the OxiSensor gently and carefully, do NOT wiring or shake the data cable plug with force to insert into or unplug from data interface port.
2. Before updating the "OxiSensor Demonstrator and Data Logger" software, please uninstall the previous procedure if there is, and manually delete all the files in the default folder.

   For example, "OxiSensor Demonstrator and Data Logger" is installed the file "C:\ OxiSensor Demonstrator and Data Logger". At first. Uninstall the "C:\ OxiSensor Demonstrator and Data Logger" software from "Control Panel→Add/Uninstall Programs", and then manually delete all files under the directory "C:\ OxiSensor Demonstrator and Data Logger". Next, install the new version of "OxiSensor Demonstrator and Data Logger".

Table of Contents

1 Overview

1.1 Introduction

The system "|OxiSensor Demonstrator and Data Logger" is intended to transmit the SpO_2 value and pulse rate value, which were measured by OxiSensor, to the PC through SpO_2 probe data cable to be real time displayed,viewed, managed and analyzed. It's convenient for users to measure, to view records and statistical result, and archive patient's data.

1.2 Operation Prerequisite

Requirement for computer:

Hardware requirement:

PC with Intel Pentium Ⅲ CPU, 800MHz clock or higher; 256MB or higher memory; CD-ROM drive; at least 1GB space available in the hard disk to install OxiSensor Demonstrator and Data Logger software.

Software requirement:

Microsoft Windows XP, Windows 2000, Windows 7, Windows 8 or Windows Vista Operating System.

1.3 Procedure of SpO2 Data Upload

1. Install the “OxiSensor Demonstrator and Data Logger” software.

2. Set the resolution of screen display as “1024×768” pixel (best fit), or higher.

3. Connect the SpO_2 probe to PC through SpO_2 probe data cable (refer to figure 2-9). Open the SpO_2 probe and insert the index finger into it.

4. Double-click OxiSensor Demonstrator and Data Logger icon “  ” to start running it and on the main menu screen click “Patient Record” to add a new user archive.

5. Click “Real time Data ” button to acquire data, and then add the data to user archive for saving.

6. Click “Data Review” button to review and browse records.

Refer to each section for detailed operation.

2 INSTALLATION, CONNECTION AND SETTINGS

2.1 Installation of OxiSensor Demonstrator and Data Logger

Insert the CD-ROM which contains the installation software into CD-ROM drive, and the software installation will be automatically running or directly running the programme "setup.exe" in the root directory of CD-ROM drive, then the window of "OxiSensor Demonstrator and Data Logger Setup" will be prompted on the screen as shown in Figure 2-1.

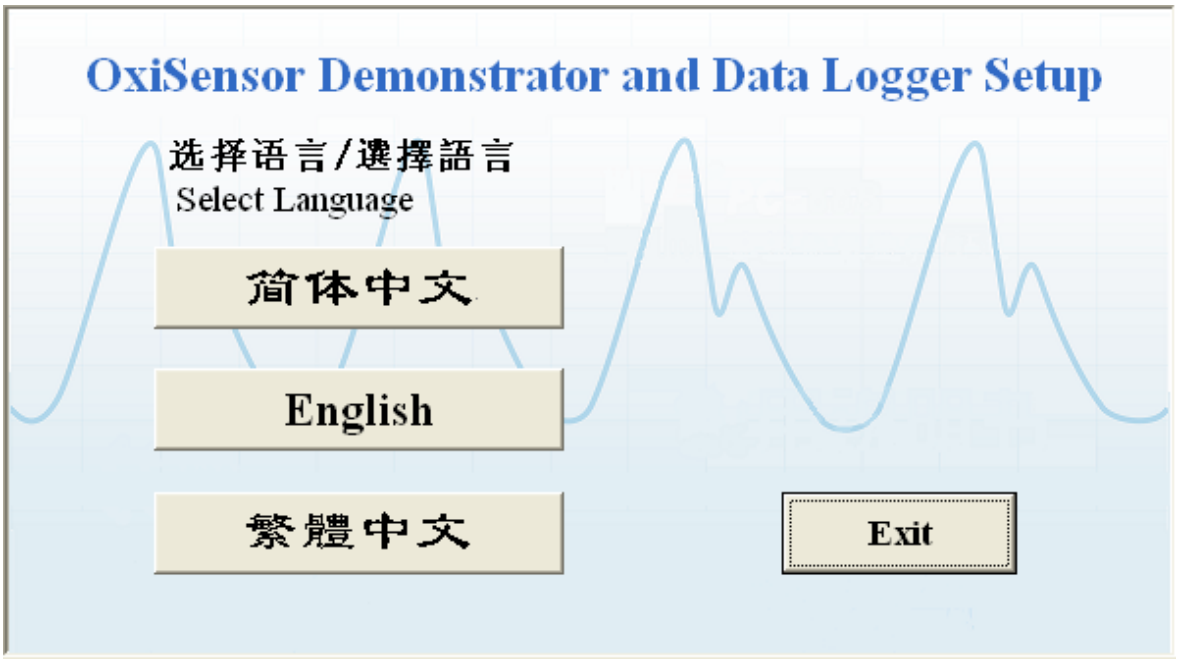


Figure 2-1 Setup Screen

On OxiSensor Demonstrator and Data Logger Setup screen, firstly click on "English" button to install main program and please follow the instruction to install. Installing screens are shown bellow: When clicking the "Finish" button to finish the installation of OxiSensor Demonstrator and Data Logger, the USB driver procedure will run automatically.

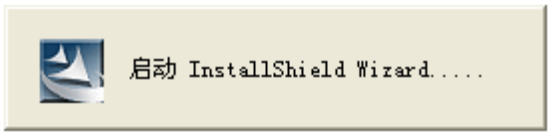


Figure 2-2

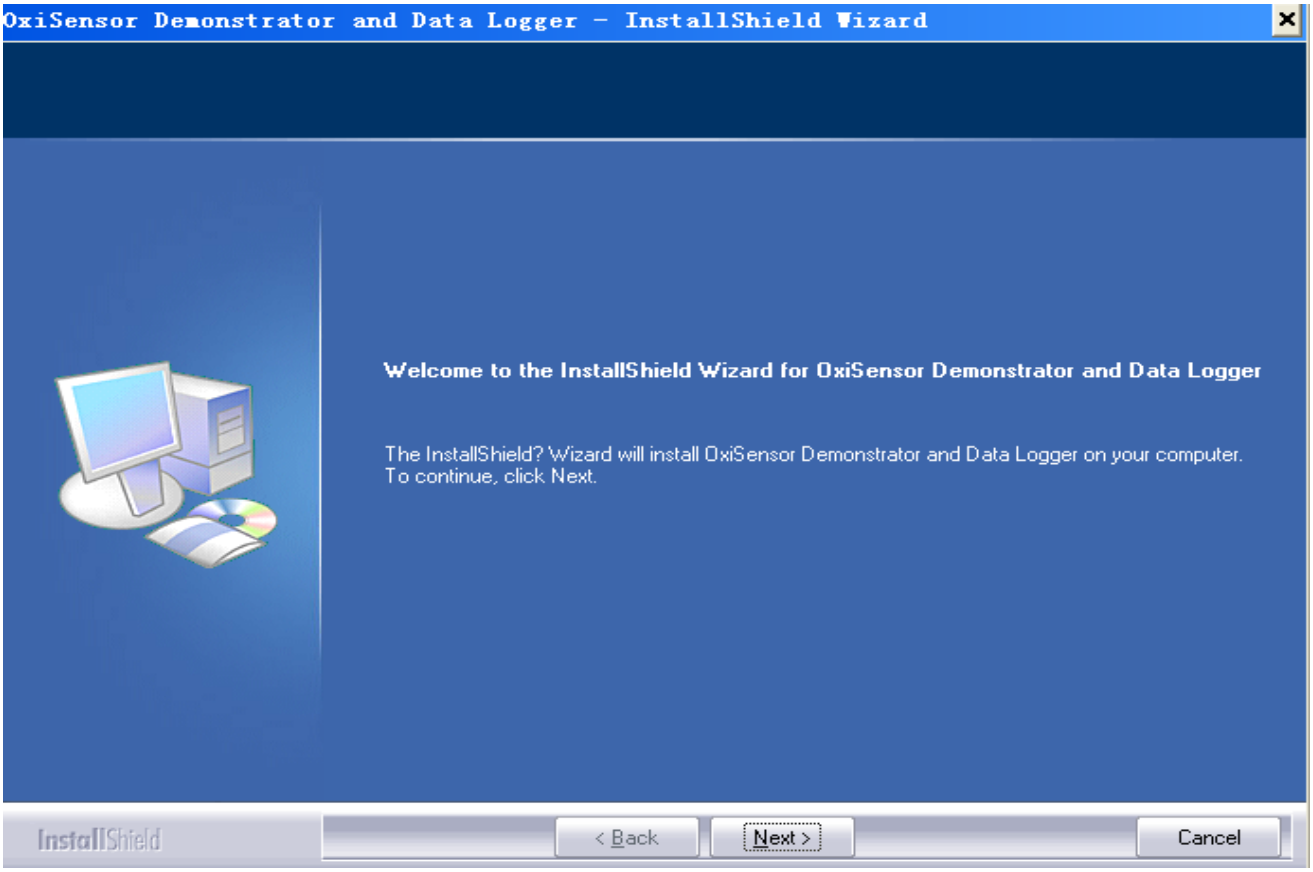


Figure2-3

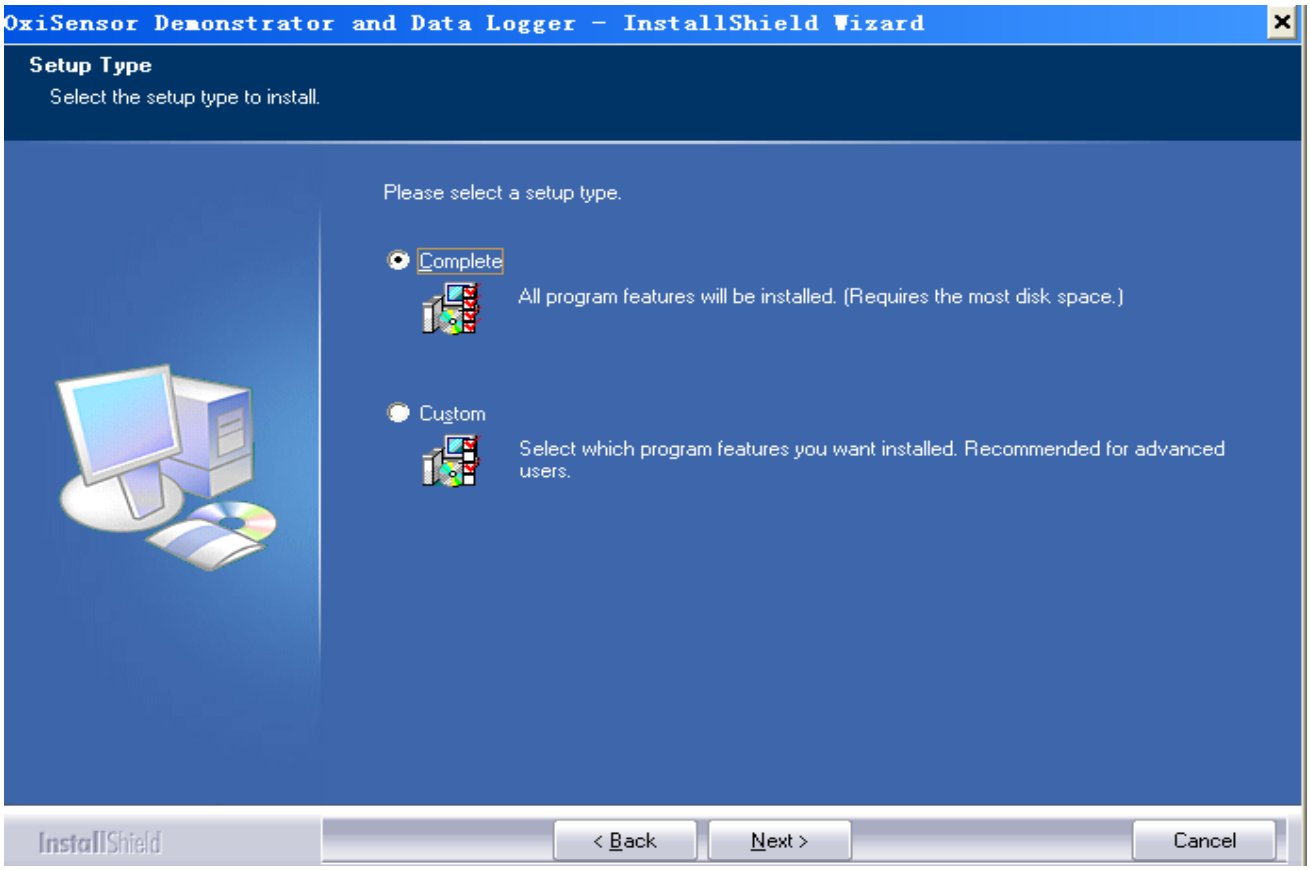


Figure2-4

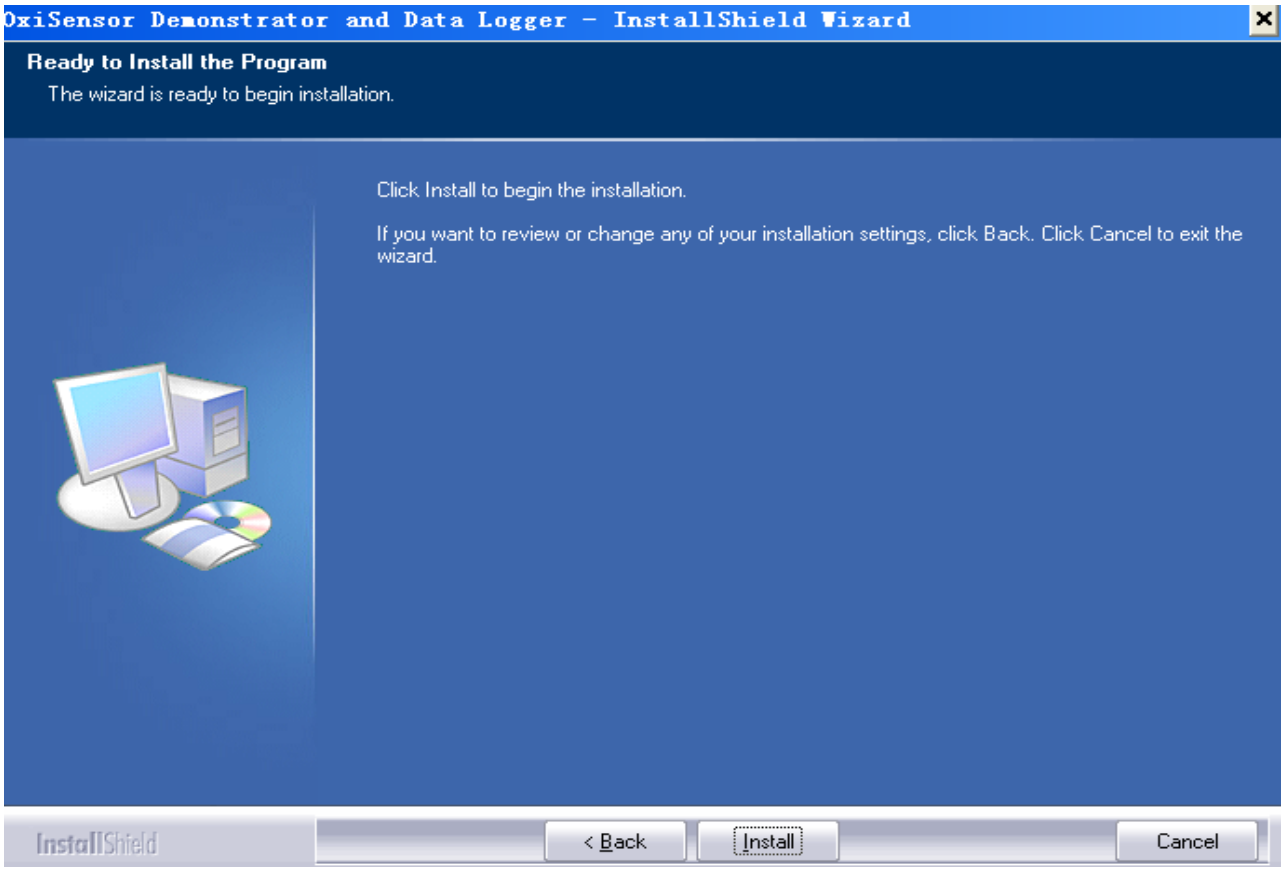


Figure2-5

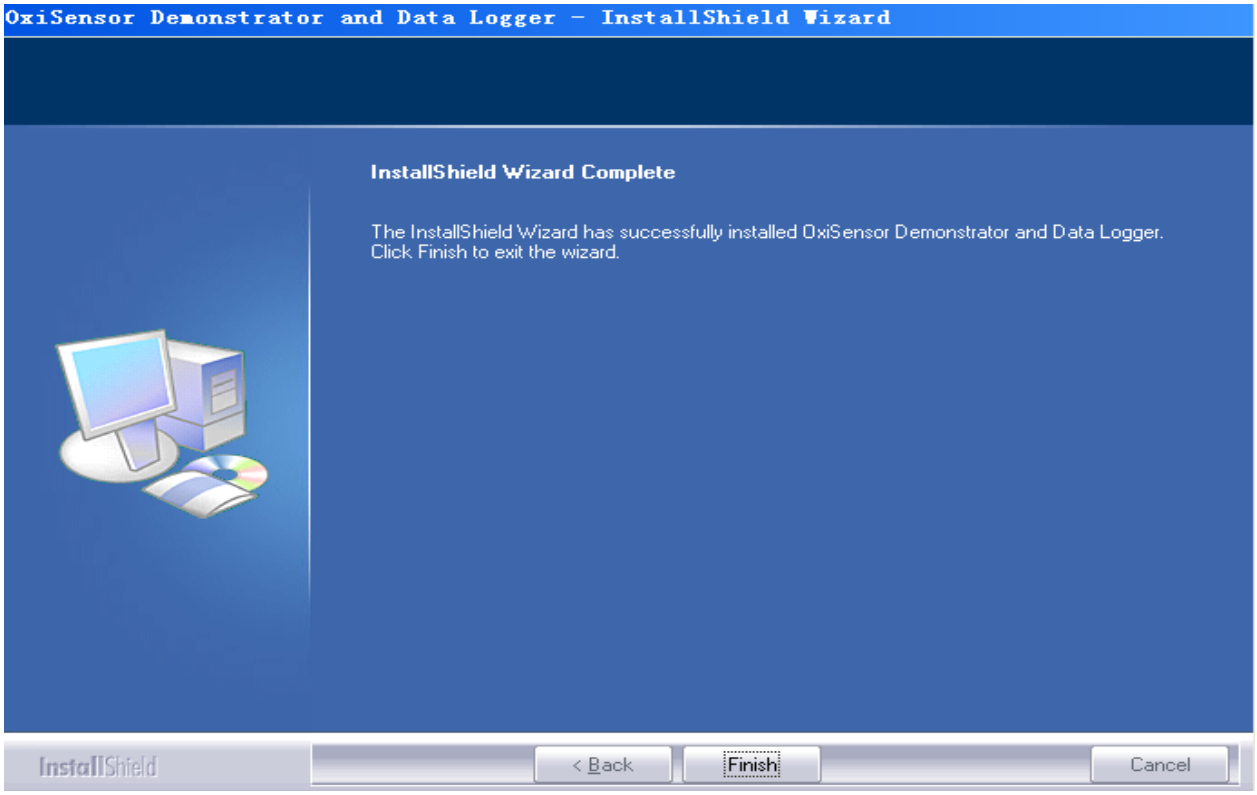


Figure2-6

Note: If user uses the default installation, the installation file will be installed in the default path "C:\ OxiSensor Demonstrator and Data Logger"

2.2 PC Setting

2.2.1 Setting Display Properties

After entering into Windows operating system desktop, click the right key of the mouse, and the desktop springs a quick menu, and then move the cursor to select “Properties”. Choose “Settings” on the “Display Properties” window, then set the “Screen resolution” option as “1024 by 768 pixels”, and set the “Color quality” option as 16bit at least, as shown in Figure 2-7.

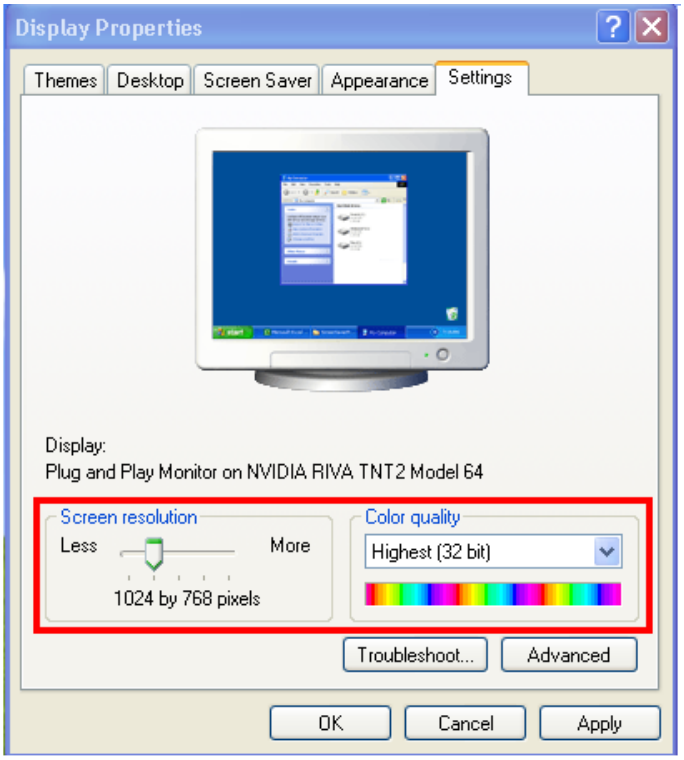


Figure 2-7 Display Properties Setup

2.3 Probe Connection

After installing OxiSensor Demonstrator and Data Logger (refer to Figure 2-8) and performing the cable connection, then put the testee's index finger or middle finger or third finger into the SpO_2 probe for measuring.

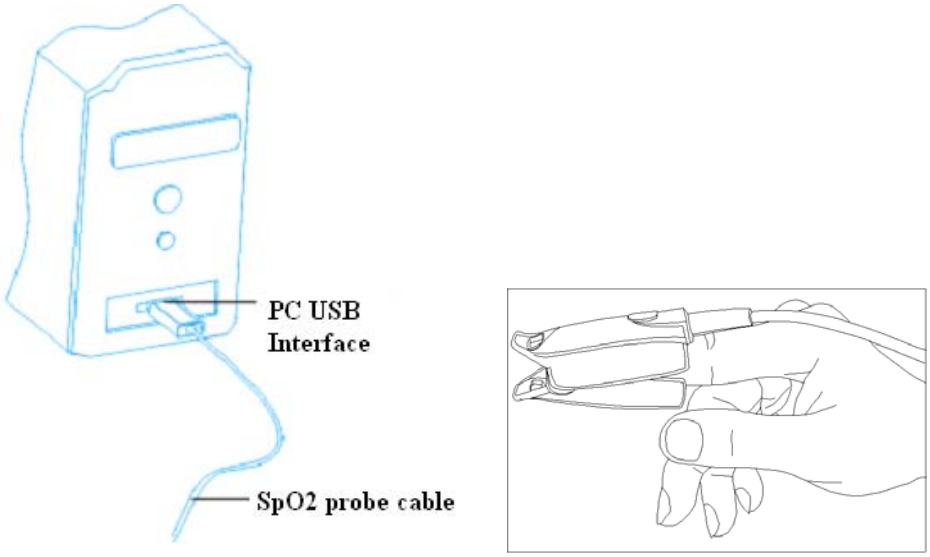


Figure 2-8

Note: when connecting the OxiSensor at the first time, the system prompts that "Found New Hardware. Your new hardware is installed and ready to use." on the lower right, as shown in Figure 2-9, it means that USB Driver is installed successfully.

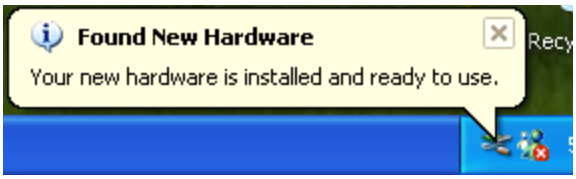


Figure 2-9

3 Operations

3.1 Main Menu

Double-click OxiSensor Demonstrator and Data Logger“  ” on the desktop with the Mouse, then the OxiSesor Demonstrator and Data Logger runs automatically and the main menu screen displays on the screen, as shown in Figure 3-1.

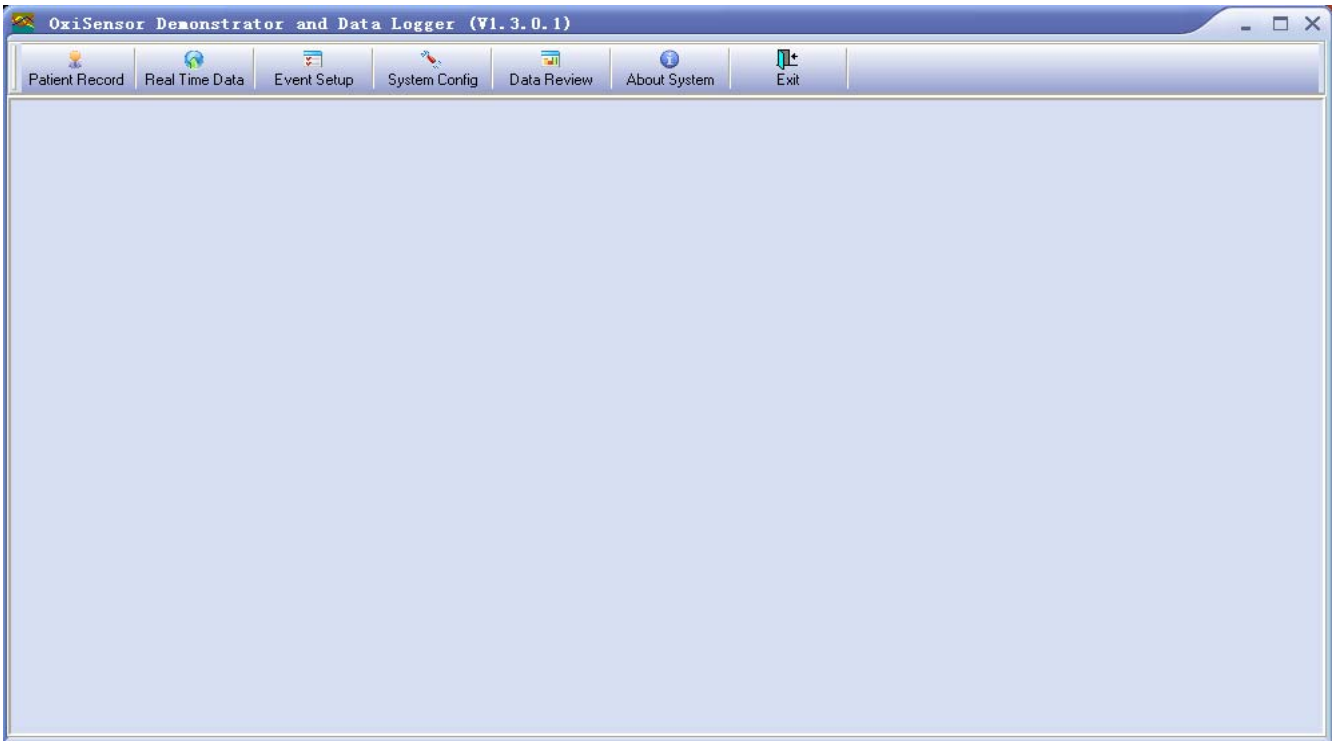


Figure 3-1 Main menu

Menu bar:

✧ Menu instructions

Menu	Function description
Patient record	**perform patient record management, patient record creating, modifying and deleting can be done**
Real Time Data	**perform real-time data measurement and transmission through SpO_2 probe**
Event setup	**set event definition**
System Configuration	**set system configuration**
Data review	**view data and print report etc.**
About system	**view software information**
Exit	**Exit from the software**

✧ Operation instructions

Select the function item from the menu for its relevant operation interface.

3.2 Patient Record

On main menu screen click on “Patient Record” button, then pops up Patient Record window on the desktop.

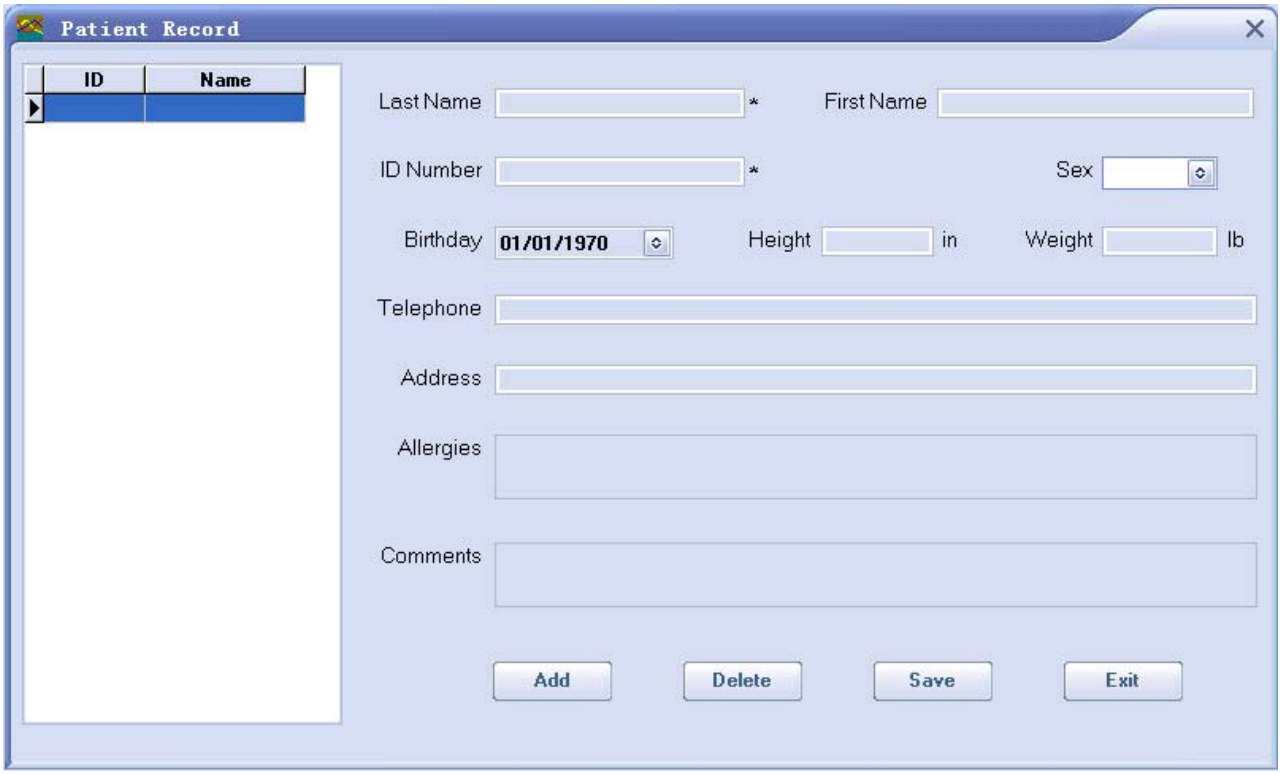


Figure 3-2 Patient Record Screen

Screen Description:

On patient record window, adding new archive, modification and deleting archive can be performed. On the left of screen is name list; on the right of screen is detailed information of the selected archive, and entering personal data is operated in this area.

- **Last Name:** display or enter patient’s last name; the length of last name is less than 15bytes.
  First Name: display or enter patient’s first name; the length of first name is less than 15bytes.
- **ID:** detecting number; display or enter detecting number; the length of ID is less than 6 bytes.
- **Sex:** click on “▼” to choose Male/Female in submenu.
- **Birthday:** patient’s birthday; display or enter patient’s birthday. You can click on “▼” to choose birthday in its submenu, or click year value and use keyboard to enter birthday. The operation of Month and Day set are the same with Year set.
- **Height:** patient’s height; display or enter patient’s height
- **Weight:** patient’s weight; display or enter patient’s weight.
- **Telephone:** patient’s telephone number; the length of phone number is less than 25 bytes.
- **Address:** patient’s address; length of address is less than 60 bytes.
- **Allergies:** allergic symptom description of patient after using the OxiSensor; if no allergies appear, just enter “No”; length of words is less than 100 bytes.
- **Comments:** Description of diagnostic result; length of words is less than 100 bytes.

Functional button:

- ✧ **Add:** new file setup button; if user need to add a new file, please click this button and then enter patient's detailed data in blank.
- ✧ **Delete:** delete the selected file in archive list.
- ✧ **Save:** confirm and save the new file or modification about patient's information.
- ✧ **Exit:** Exit from Patient Record screen.

3.3 Data Acquisition

On main menu screen click on "Real Time Date" button, then pops up Patient Record window on the desktop. Click on "Receiver" button and put the testee's index finger into the probe, then the measurement displays on the screen, as show in Figure 3-4.

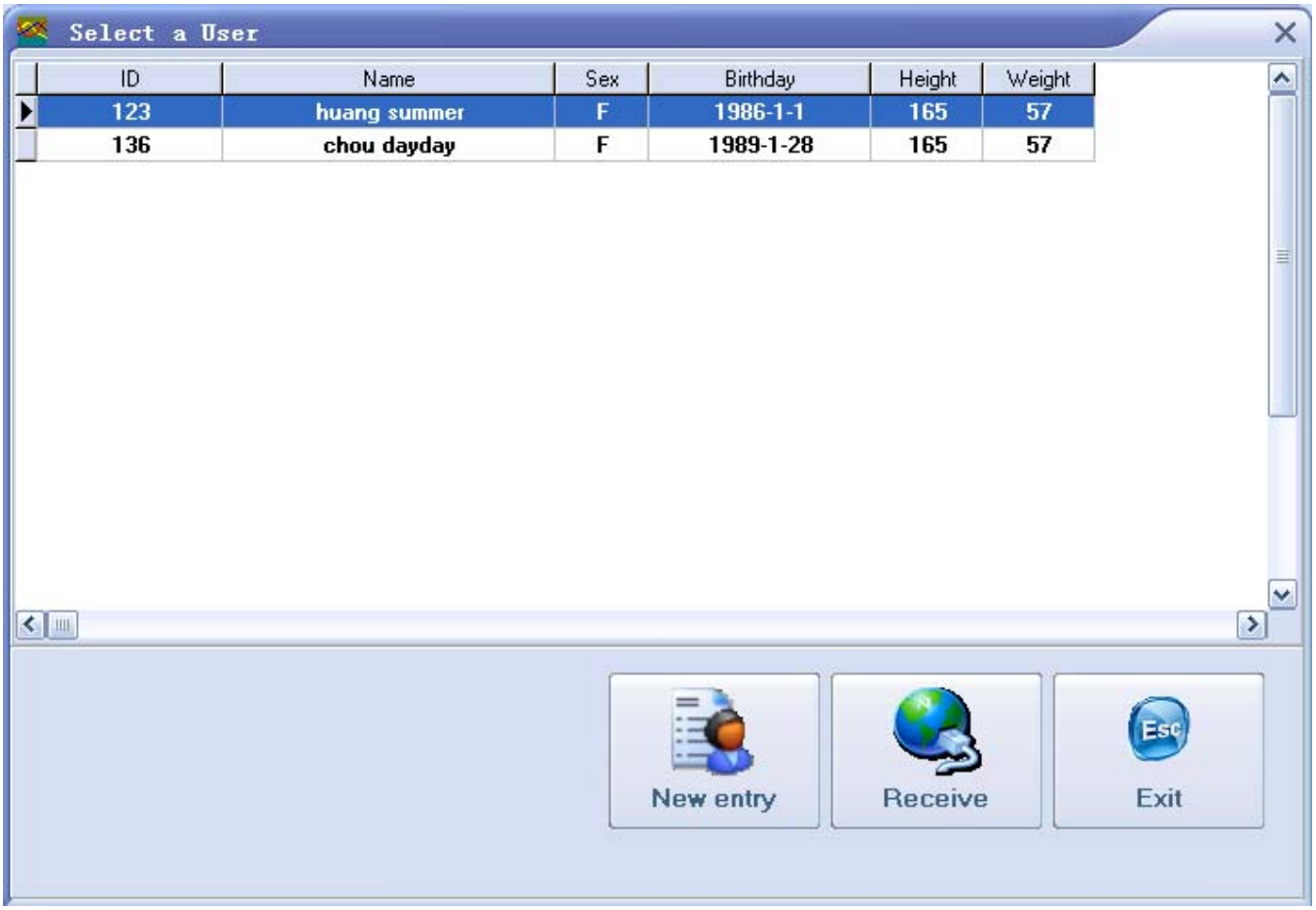


Figure 3-3 Real Time Data

Note: If user has not set up a new archive, click on "New entry  **" button to perform entering archive operation. See section 3.2 Patient Record for details.**

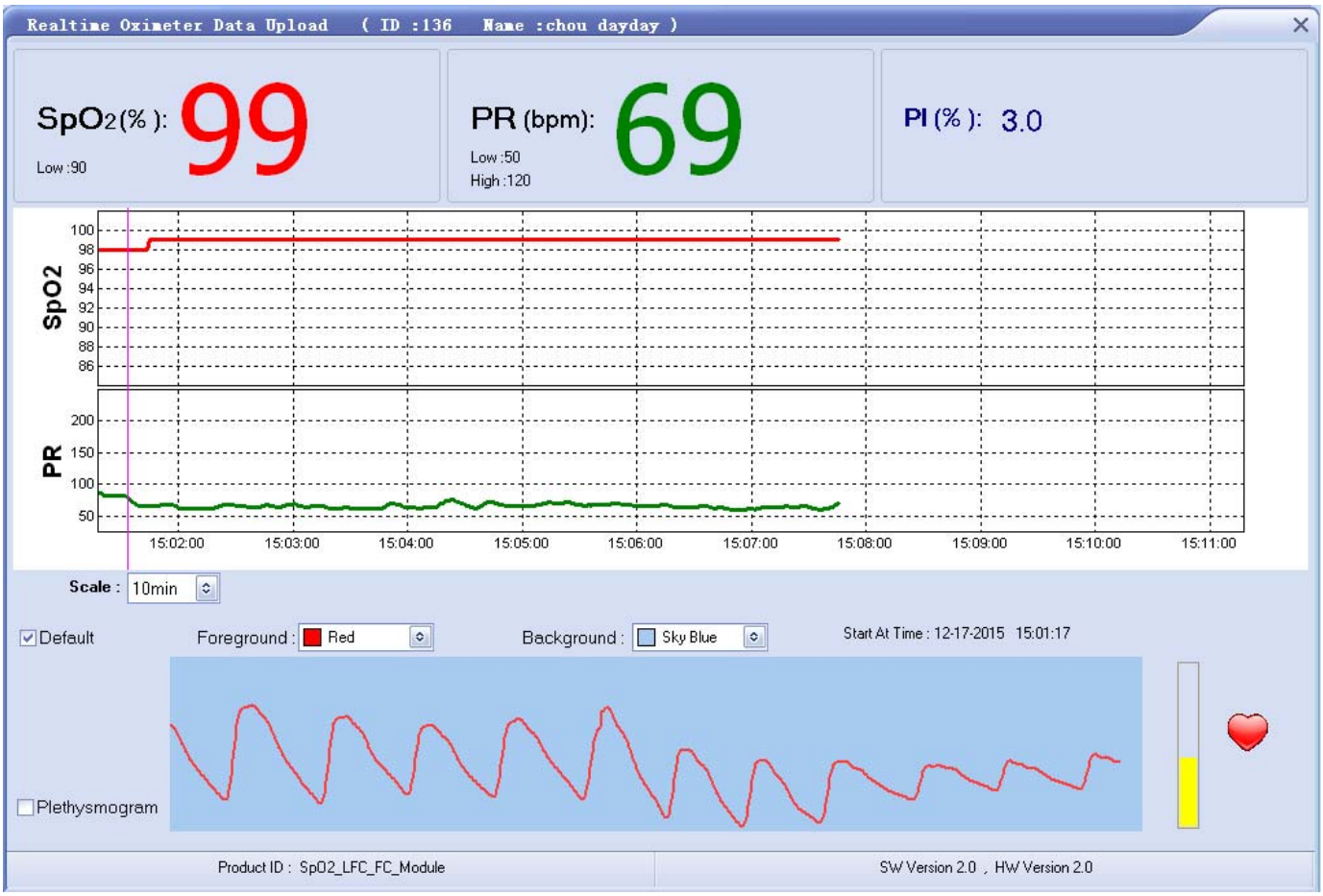


Figure 3.4 Real Time Data Receiving

Screen Description:

Top of the Screen: Display the realtime measurement data of SpO_2, Pulse Rate (PR) and Perfusion Index(PI) value, including the high/low limits of alert for SpO_2 and Pulse Rate.
Middle of the Screen: The trend graphics of SpO2 and Pulse Rate
Bottom of the Screen: Waveform, Bar graph and its symbol"".

Operation Description:

- **Scale:** set the trend time scale for display all the graphic trends; options: 5 min/screen, 10 min/screen, 15 min/screen, 30min/screen, 1h/screen and 2 h/screen; the default is 10 min per screen.
- **Foreground:** Click "" to select the color of Waveform.
- **Background:** Click "" to select the back color of Waveform.
- **Default:** Select "Default" means that the default color for Waveform is red and the background color is sky-blue.
- **Plethysmogram:** Select "Plethysmogram", Plethysmogram will be displayed in entity.

Note:

1. If the SpO_2 probe has not been inserted into the PC USB interface, then message "Check Probe" pops up on the screen. If there is no finger putting into the probe or no finger is checked, then message "Probe

off" pops up on the screen. Failure to connect again for 3 min, the system will close the real time data receiving. The data will be saved and can be reviewed.

2. If the measured data exceeds the high/low alert limit, the alert icon " " displays on the screen, the alert sound will be activated at the same time. Click on the alert icon will mute the alert sound for 90 seconds, and the icon changes to " 90 ". After this period, if the alert event still exists, the alert icon " " will appear and the alert sound will resume again.

3.4 Data Review

3.4.1 Trend Review

1. On main menu window, select “Data Review” to enter into data review screen, as shown in Figure 3-5. There are two tabs: Trend Review and Record Management.

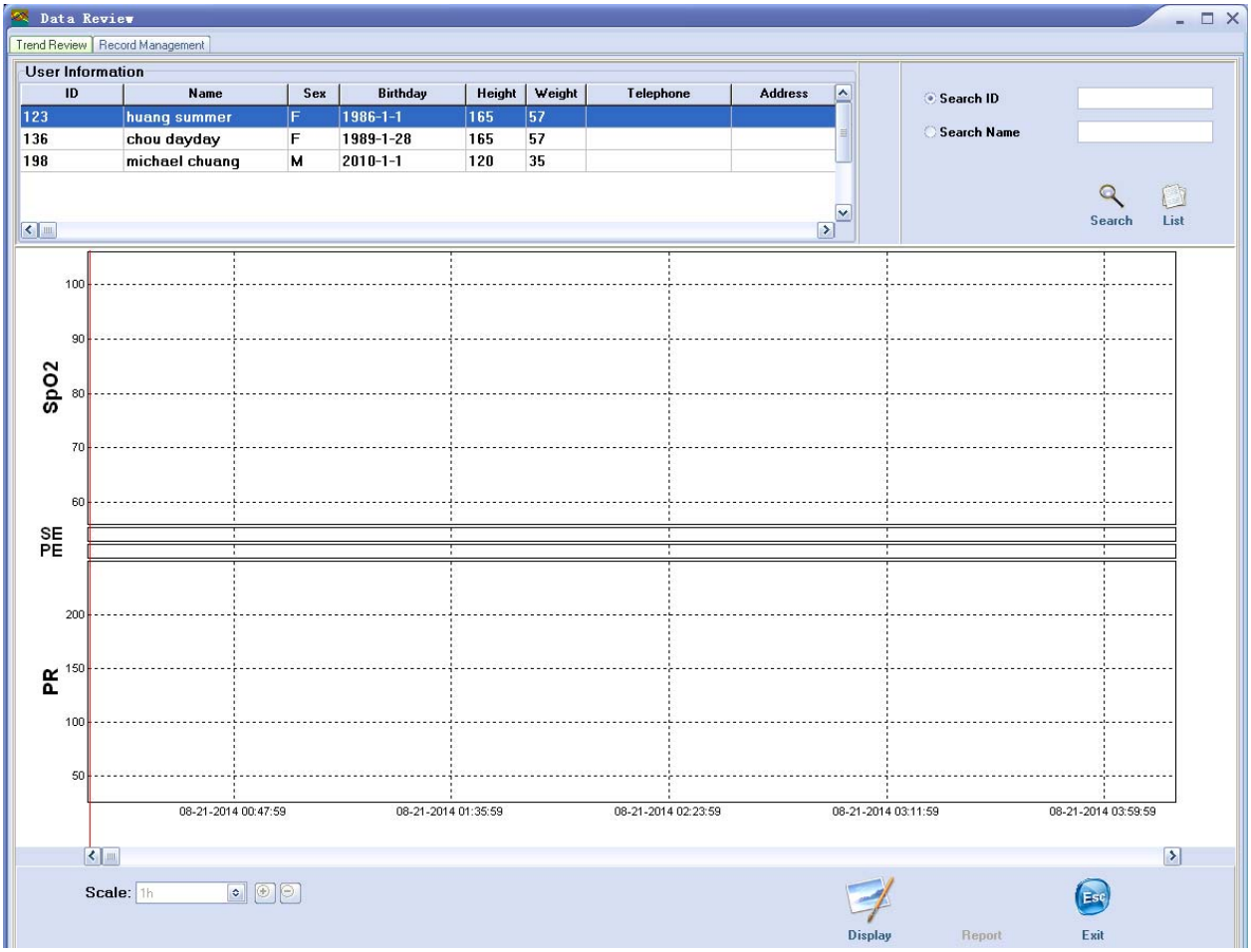


Figure 3-5

2. Select a member in archive list, and then click on “Display” button. All the SpO_2 and pulse rate graphic trends of this patient will be displayed in graphic trend area (as shown in Figure 3-6)

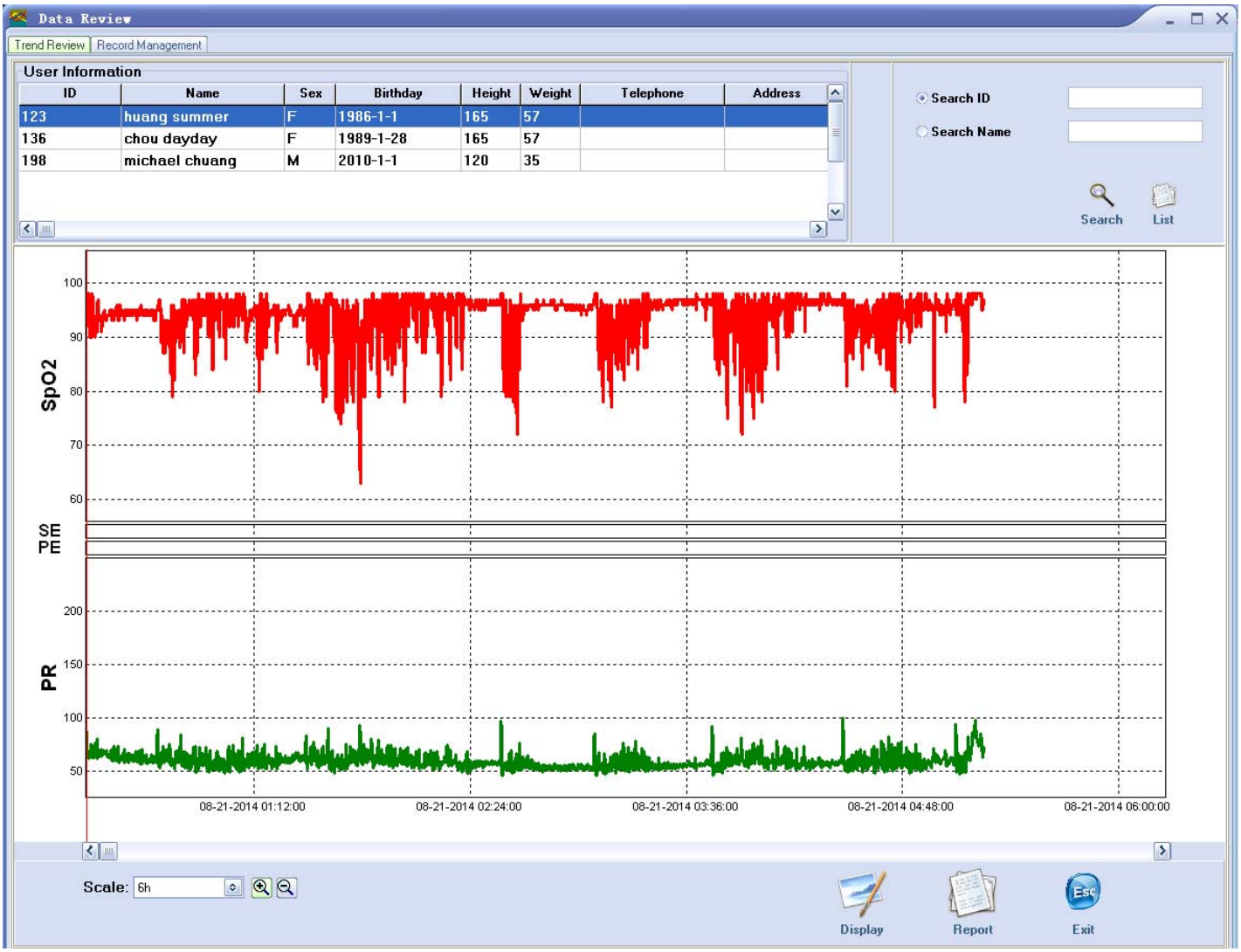
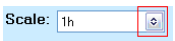


Figure 3-6

3. If the record can not be displayed on one screen, it will be divided into several pages automatically. Please click "  " or "  " to turn to another page. The default trend time scale is 1 hour.

4. Click " 

" to choose the trend time scale for displaying all the graphic trends. Or click on "  " /"  " to zoon out/in the graphic trends.

✧  **Display:** Display graphic trend.

✧  **Report:** Output report of data visualization. The trend record displaying on the screen will be printed.

3.4.2 Record Management

Choose "Record Management" page. Select an archive member, all the records of this patient will be listed in record list. Next, choose a piece of record from record list, all the graphic trends corresponding to this record will be displayed in graphic trend area (as shown in Figure 3-7).

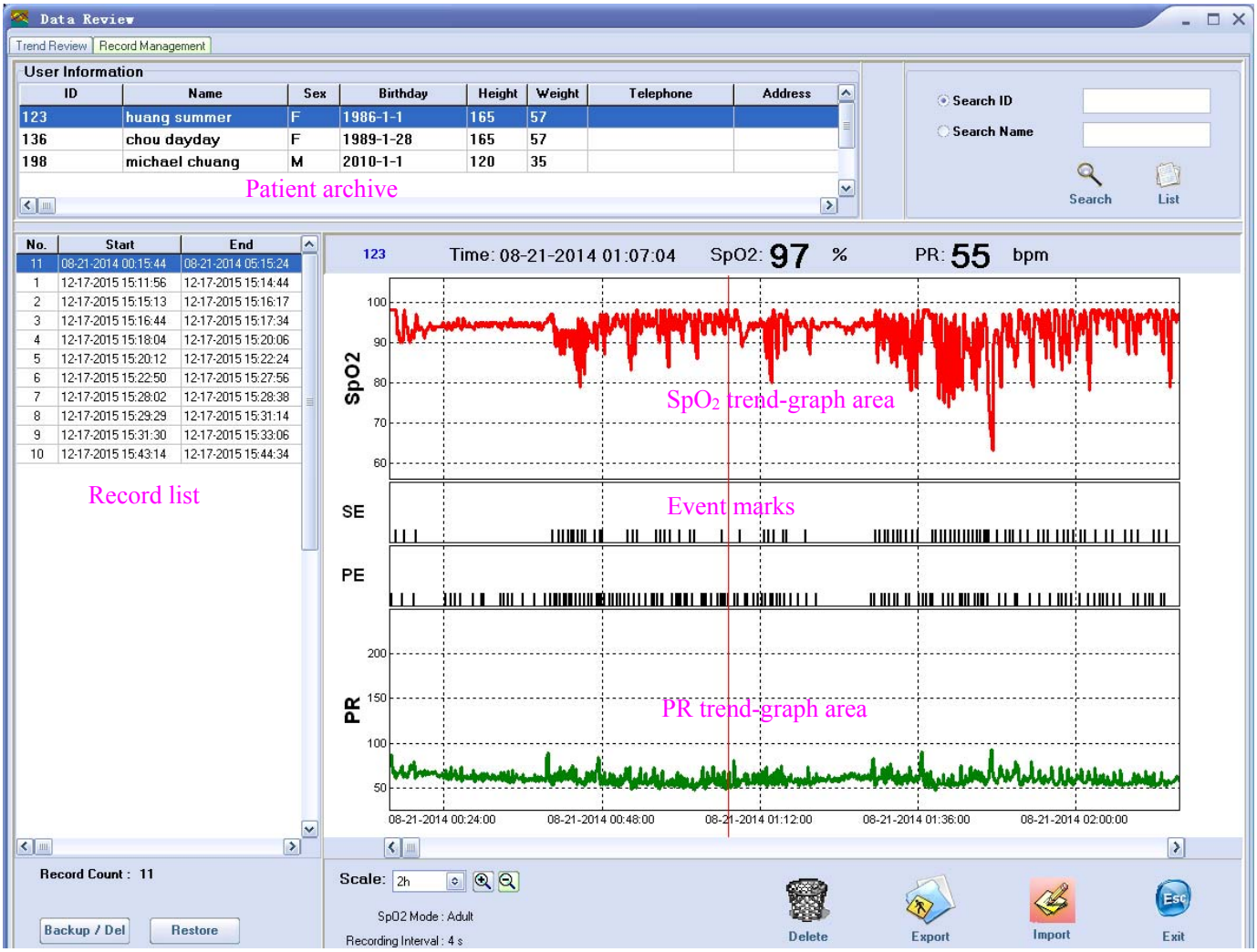


Figure 3-7 Record Management

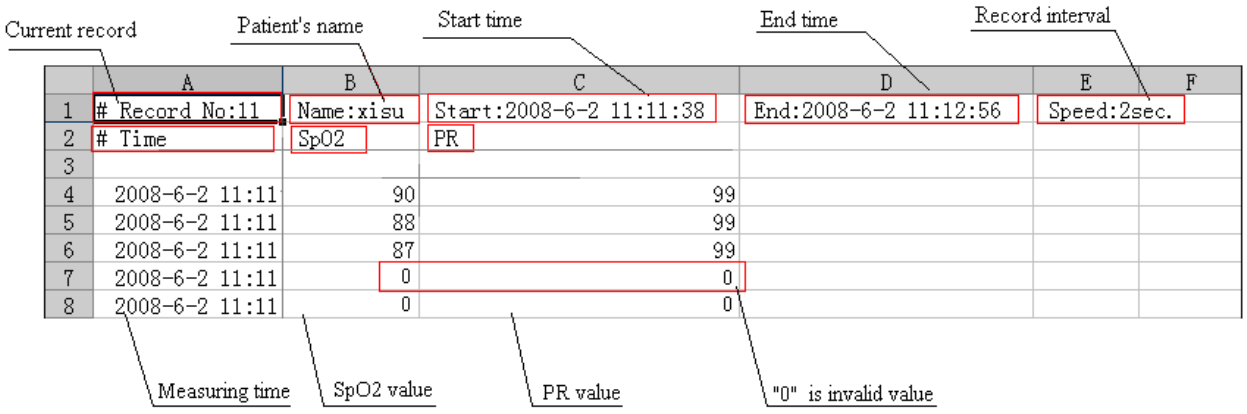


Figure 3-8A Exported Sample File

Screen Description:

✧ **Scale** 12H **:** to set the time tread scale for display all the graphic trends; options: 5 min/screen, 10 min/screen, 15 min/screen, 30min/screen, 1h/screen, 2h/screen, 3h/screen, 4h/screen, 5h/screen, 6h/screen, 7h/screen, 8h/screen and 12 h/screen; the default is 1 hour per screen.

-  : Turn to previous page/next page;
- **Search:** Turn to query condition for searching patients' archive;
-  **Export:** Export the current record to a data file. The file name will be "XXX.cvs" which is a plain text document, and can be opened by software such as "EXCEL" or "NOTEPAD". See Figure 3-8A for exported sample file.
-  **Import:** Import the data file (csv. format) stored on the computer to the current user's account.
-  **Backup/Delete:** Click this icon, then a dialog (as shown in figure 3.8B) pops up on the screen, which allows user to back up (the file name will be "xxx.dat") or delete the selected data records.
-  **Restore:** restore the data records from the data file which is backed up by"  Backup/Del" function to the current user's account, as shown in figure 3.8C & 3.8D.
-  **Delete:** Delete current selected in record list.
- **SpO_2 Mode:** Adult. Display the working mode, such as patient type of "Adult", "Pediatric".
- 08-21-2014 SpO_2:97% PR: 55bpm. Display the measuring time, the measured SpO_2 and PR of the current record.
- **Recording interval:** 4s. Display the time interval for recording data group (SpO_2 and PR).
- **Record Count:** 11. The total records quantity of the current selected user account.

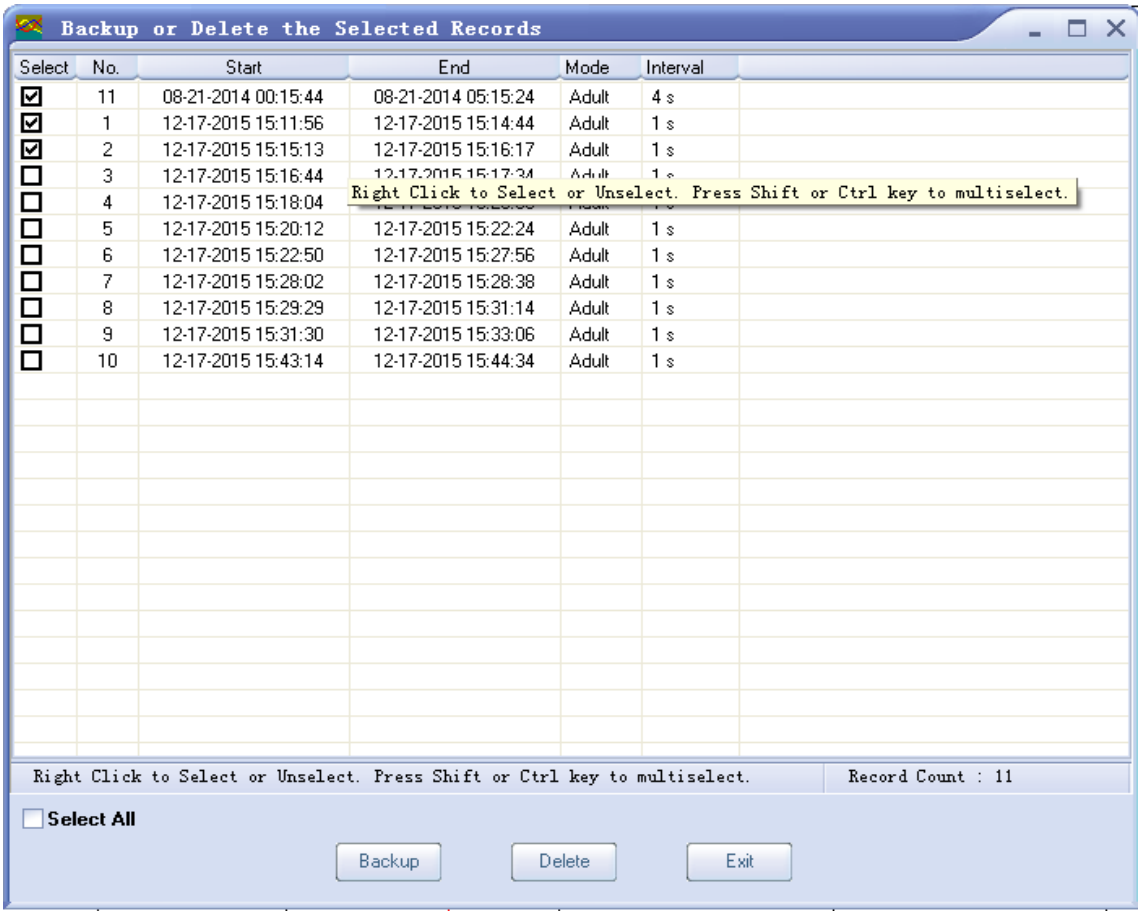


Figure 3.8B Backup/Delete selected record

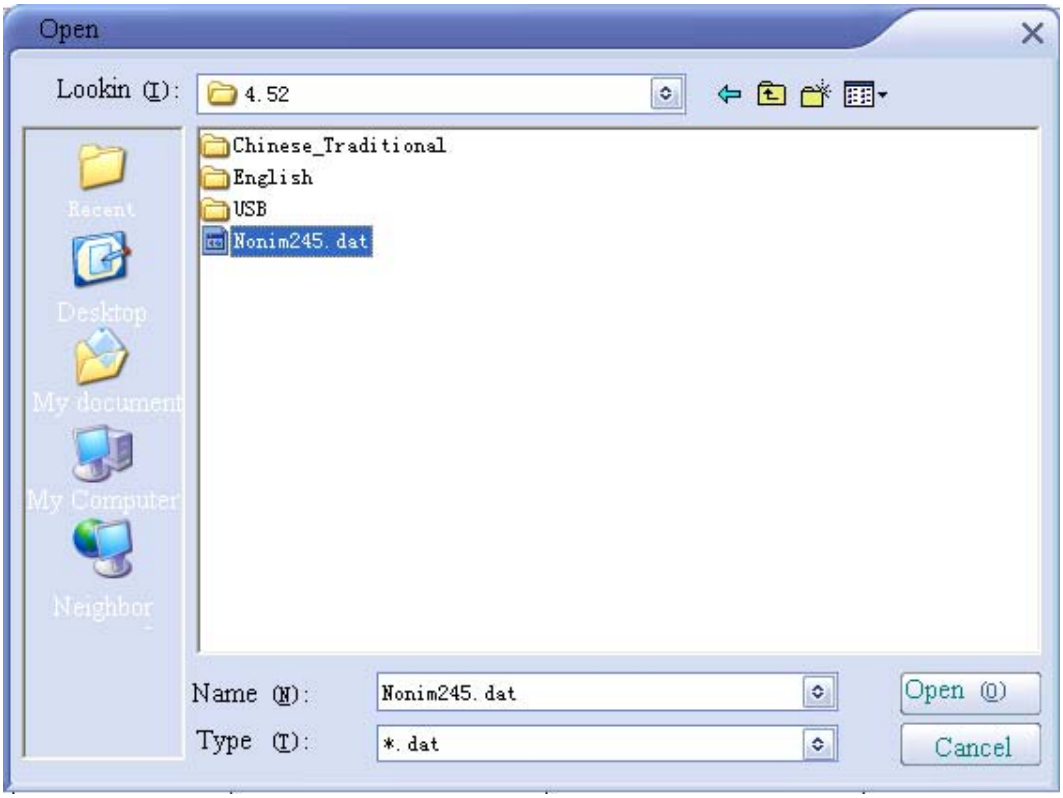


Figure 3.8C Restore data archive---select data file with ".dat"

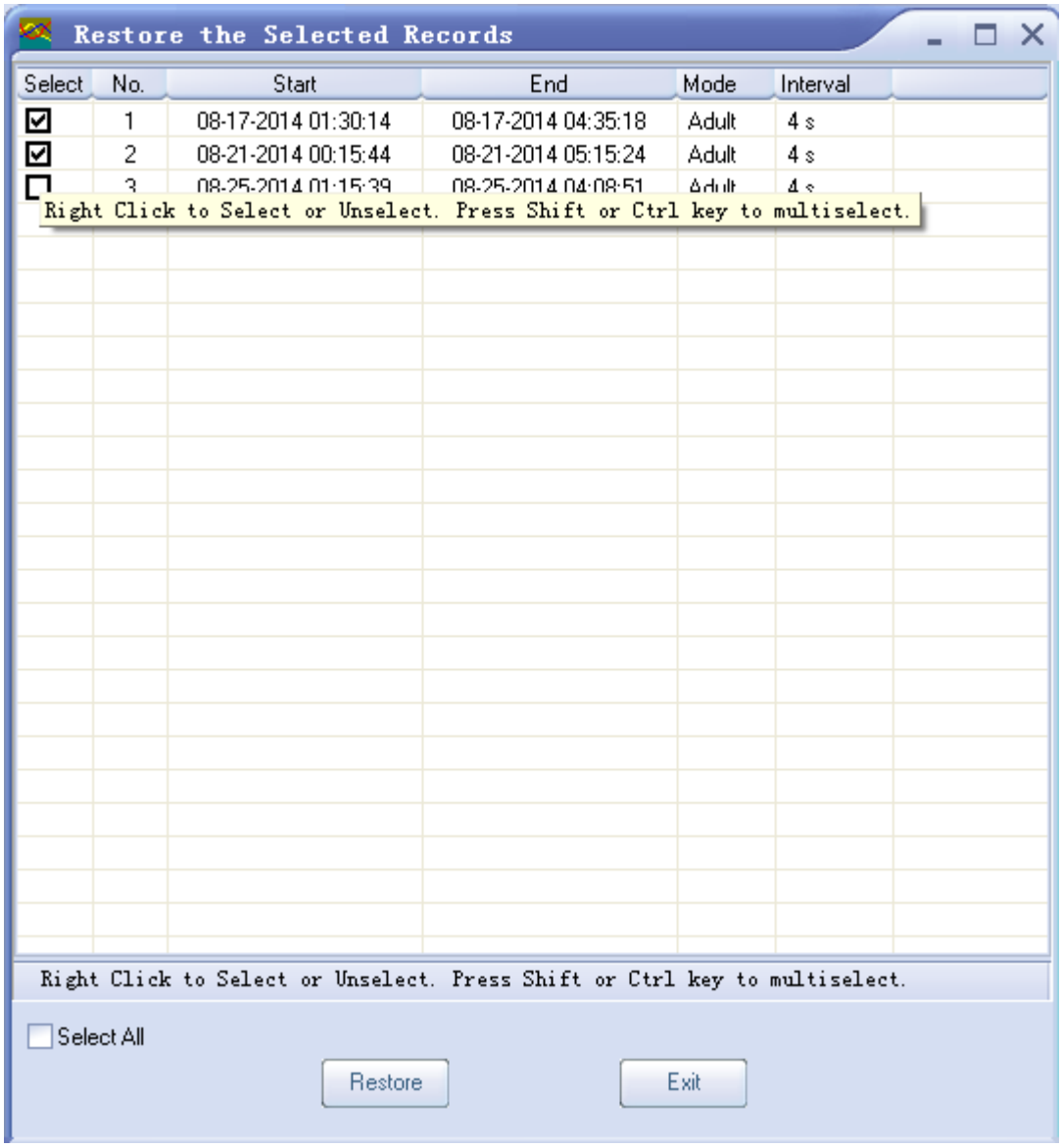


Figure 3-18D Restore data archive---select records

Operation instructions for reviewing graphic trend:

On Graphic Trend of a Piece of Record, choose a piece of record from record list, all the graphic trends corresponding to this record will be displayed in graphic trend area and a red staff line on the left will occur in the heart rate trend graph area as well. Shift mouse and click any dot in trend curve can move the stuff line to scale. Its corresponding record including measuring time, SpO_2 value and PR value shows above the trend review window. Adjust "Scale" i.e. trend time for better review.

If the record can not be displayed on one screen, it will be divided into several pages automatically. Please click "  " or "  " to turn to another page.

Event mark

If SpO_2 or pulse rate value exceeds event triggering condition, there will be a mark " ▌ " made in SE area or PE area.

3.4.3 Report

On data review window, choose a piece of record in record list firstly, and then click "  Report" button to open report window (as shown in Figure 3-9).

Figure 3-9

✧ **Report Option**

Comprehensive Report: print SpO_2 and pulse rate statistical analysis and graphic trends corresponding to this record.

Strip chart Report: print all the graphic trends corresponding to this record.

Summary Report: print the entire event information and SpO_2 and pulse rate distribution chart corresponding to this record.

%Times Text Report: print the percentage of duration over the total measuring time, during which, the predefined range of SpO_2 or PR value occurred. The occurrence of SpO_2 or PR value within the predefined range will be printed out accordingly.

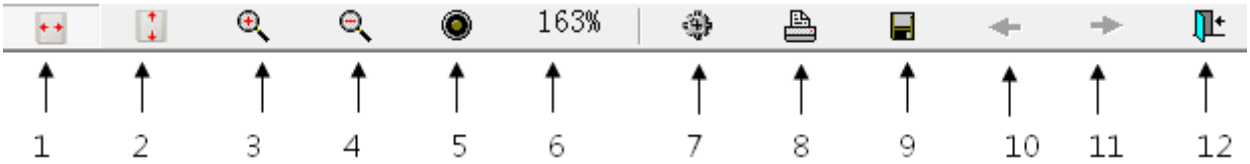
Desaturation Report: print all the SpO_2 event information.

✧ **Preview**

Click on "Preview" to preview the report. The samples of **Comprehensive Report (Figure 3-10), Summary Report (Figure 3-11), %Times Text Report (Figure 3-12)** and **Desaturation Report (Figure 3-13)** are shown below. You can print report via preview screen by clicking on the printing icon.

Operations:

On Preview display window, there is a tool bar above the report. The function of each button will be defined below.



1. "" Fit to width: Preview the report in proper width.
2. "" Fit to page: Full screen preview the report in proper proportion.
3. "" Zoom in: Click it to zoom in the report.
4. "" Zoom out: Click it to zoom out the report.
5. "" Actual size: Preview the report in actual size.
6. "163%" Zooming proportion: Displays the zooming proportion for the current report preview.
7. "" Print Setup: Select the printer type, paper size and print quality etc..
8. "": Print the current report displayed.
9. "": Save. Click this button can save the records in picture format on.
10 & 11. "": If the content of records is more than one page, click this button to turn the page up and down so as to preview all records.
12. "": Exit. Exit from the current preview.

Report Explanation

1. "SpO_2 at (Time)": it indicates the distribution chart of SpO_2 value (by percentage of total measuring time). From the table in Figure 3-7, we can get the information below: In entire measuring time, all the SpO_2 values are less than 100%.
2. "SpO_2 at (Events)": it indicates the number of events occurred at the given range of SpO_2 value.
3. In the following figures, the number "0" next to the "Duration" represents the number of day. For example, in the comprehensive report: "Duration: 0 00: 29:59" means the duration time is 0 day 0 hour 29 minutes 38 seconds.
4. Definition of ODI (Oxygen Desaturation Index): ODI = number of SpO_2 (desaturation) events / Analyzed time (hours). For example, in figure 3.10, the analyzed time is 04:59:16, corresponding to 4 + (59*60 + 16)/3600 =4.98777 (hours), number of SpO_2 events (SE) = 178, then ODI = 178/4.98777 = 35.69.

Tel:

Fax:

Name: huang summer **ID:** 123 **Birthday:** 01-01-1986 **Sex:** F

Address:

Height: 165 cm **Weight:** 57 kg **Tel:**

Comprehensive Report

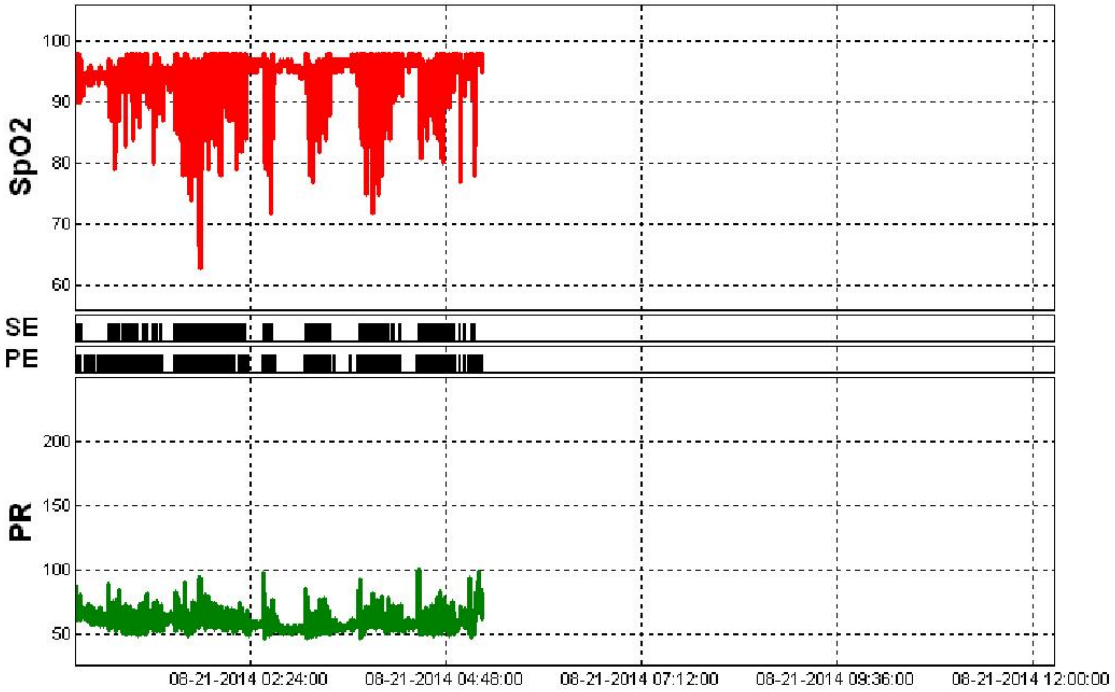
Start: 08-21-2014 00:15:44 **End:** 08-21-2014 05:15:24 **Duration:** 0 04:59:40 **Analyzed:** 0 04:59:16

Highest pulse:	100	Highest SpO2:	98	Time with SpO2<90	0 00:44:18	14.8%
				Time with SpO2<80	0 00:06:12	2.1%
Lowest pulse:	46	Lowest SpO2:	63	Time with SpO2<70	0 00:00:28	0.2%
				Time with SpO2<60	0 00:00:00	0%
Mean pulse:	58.3	Mean SpO2:	93.6	Time with SpO2<88	0 00:31:26	10.5%

SE: Drop in SpO2 by at least 4 % for a minimum duration of 10 seconds

PE: Change in rate by at least 6 bpm for a minimum duration of 8 seconds

ODI: **35.69**



Comment:

Doctor:

Figure 3-10 Comprehensive Report

Tel:

Fax:

Name: huang summer **ID:** 123 **Birthday:** 01-01-1986 **Sex:** F

Address:

Height: 165 cm **Weight:** 57 kg **Tel:**

Summary Report

Start: 08-21-2014 00:15:44 **End:** 08-21-2014 05:15:24 **Duration:** 0 04:59:40 **Analyzed:** 0 04:59:16

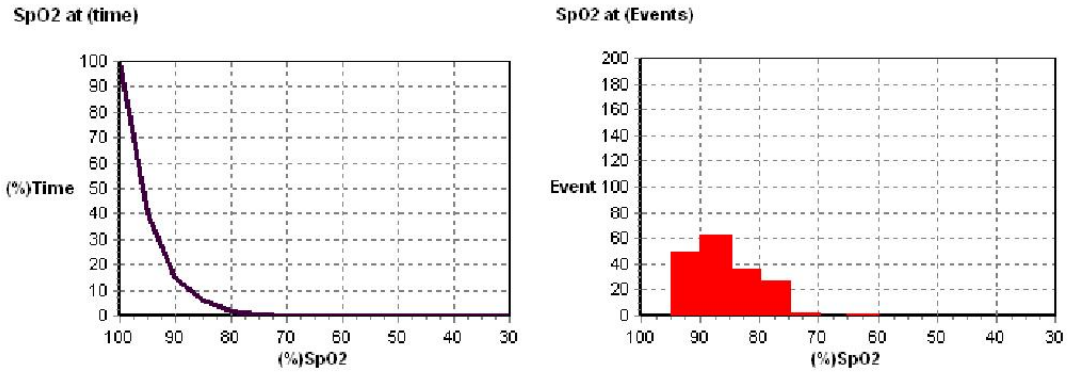
Event Data	SpO2	PR
Total Events	178	260
SpO2< 88 % Event	101	
SpO2< 88 % Time(%)	10.5	

% SpO2 Level	Events	SpO2 Below	Time(%)
99 -- 95	0	100	100
94 -- 90	49	95	40.1
89 -- 85	63	90	14.8
84 -- 80	36	85	6
79 -- 75	26	80	2.1
74 -- 70	3	75	0.4
69 -- 65	0	70	0.2
64 -- 60	1	65	0
< 60	0	60	0

ODI
35.69

SE: Drop in SpO2 by at least 4 % for a minimum duration of 10 seconds

PE: Change in rate by at least 6 bpm for a minimum duration of 8 seconds



Comment:

Doctor:

Figure 3-11 Summary Report

Tel:

Fax:

Name: huang summer **ID:** 123 **Birthday:** 01-01-1986 **Sex:** F

Address:

Height: 165 cm **Weight:** 57 kg **Tel:**

% Times Text Report

Start: 08-21-2014 00:15:44 End: 08-21-2014 05:15:24 Duration: 0 04:59:40 Analyzed: 0 04:59:16

SpO2	Time(%)	SpO2	Time(%)	SpO2	Time(%)
100	0	89	2.3	79	0.6
99	0	88	2	78	0.4
98	7.2	87	1.9	77	0.3
97	16.1	86	1.3	76	0.2
96	22.2	85	1.3	75	0.1
95	14.3	84	1.3	74	0.1
94	10	83	0.5	73	0.1
93	5.8	82	0.8	72	0.1
92	3.8	81	0.8	71	0
91	3.1	80	0.5	70	0
90	2.7				
Total 90's	85.2	Total 80's	12.7	Total 70's	1.9

SpO2	Time(%)	SpO2	Time(%)	SpO2	Time(%)
69	0	59	0	49	0
68	0	58	0	48	0
67	0	57	0	47	0
66	0	56	0	46	0
65	0	55	0	45	0
64	0	54	0	44	0
63	0	53	0	43	0
62	0	52	0	42	0
61	0	51	0	41	0
60	0	50	0	40	0
Total 60's	0.2	Total 50's	0	Total 40's 0	< 40 0

Pulse range	Time(%)	Pulse range	Time(%)
> 199	0	90 -- 99	0.4
180 -- 199	0	80 -- 89	1.1
160 -- 179	0	70 -- 79	4.4
140 -- 159	0	60 -- 69	25.7
120 -- 139	0	50 -- 59	66.6
100 -- 119	0	< 50	1.8

Comment:

Doctor:

Figure 3-12%Times Text Report

Tel:

Fax:

Name: huang summer **ID:** 123 **Birthday:** 01-01-1986 **Sex:** F

Address:

Height: 165 cm **Weight:** 57 kg **Tel:**

Desaturation Report

Start: 08-21-2014 00:15:44 **End:** 08-21-2014 05:15:24 **Duration:** 0 04:59:40 **Analyzed:** 0 04:59:16

				Saturation:		Pulse Range:	
	Start time	End time	Duration	Onset	Low	Low	High
1	08-21 00:16:40	00:17:48	00:01:08	98	90	61	75
2	08-21 00:17:56	00:19:40	00:01:44	98	90	61	80
3	08-21 00:19:48	00:20:28	00:00:40	97	93	62	69
4	08-21 00:40:28	00:41:00	00:00:32	97	89	53	67
5	08-21 00:41:24	00:41:44	00:00:20	92	87	60	73
6	08-21 00:42:04	00:42:20	00:00:16	93	87	62	69
7	08-21 00:42:52	00:43:12	00:00:20	93	89	59	70
8	08-21 00:43:20	00:43:44	00:00:24	93	88	57	75
9	08-21 00:43:48	00:44:12	00:00:24	93	83	54	71
10	08-21 00:44:20	00:44:48	00:00:28	96	79	55	61
11	08-21 00:44:56	00:45:24	00:00:28	96	82	52	57
12	08-21 00:45:32	00:45:52	00:00:20	95	89	57	68
13	08-21 00:46:56	00:47:16	00:00:20	95	88	64	71
14	08-21 00:47:48	00:48:00	00:00:12	97	92	57	64
15	08-21 00:48:08	00:48:28	00:00:20	97	87	56	68
16	08-21 00:51:52	00:52:32	00:00:40	97	83	49	73
17	08-21 00:52:40	00:53:04	00:00:24	97	87	52	61
18	08-21 00:53:20	00:54:00	00:00:40	98	92	55	72
19	08-21 00:56:16	00:56:48	00:00:32	98	90	49	64
20	08-21 00:56:56	00:57:20	00:00:24	98	92	53	69
21	08-21 00:57:32	00:58:08	00:00:36	98	84	52	58
22	08-21 00:58:20	00:59:00	00:00:40	98	93	51	60
23	08-21 00:59:52	01:00:20	00:00:28	97	90	50	64
24	08-21 01:01:24	01:01:56	00:00:32	97	90	49	61
25	08-21 01:02:04	01:02:32	00:00:28	97	86	49	56
26	08-21 01:06:16	01:06:44	00:00:28	97	92	52	69
27	08-21 01:08:56	01:09:48	00:00:52	95	89	56	66
28	08-21 01:12:40	01:13:08	00:00:28	95	86	52	74
29	08-21 01:13:16	01:13:48	00:00:32	96	80	54	64

Comment:

Doctor:

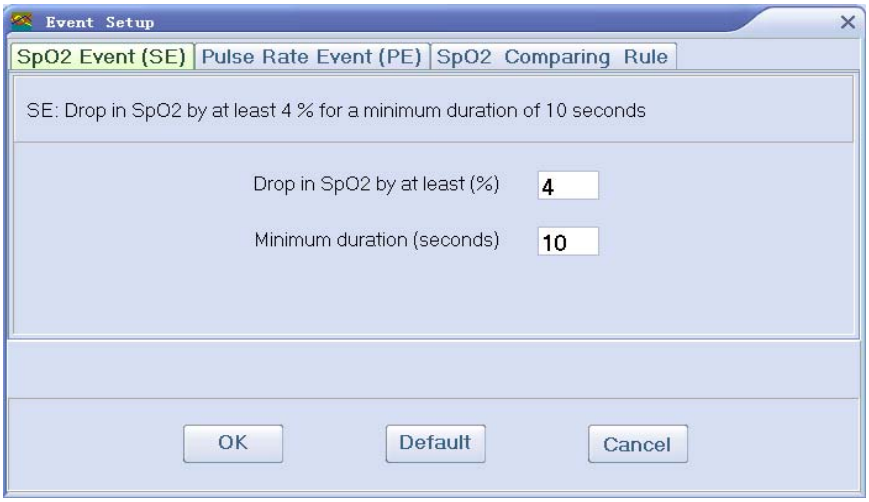
1

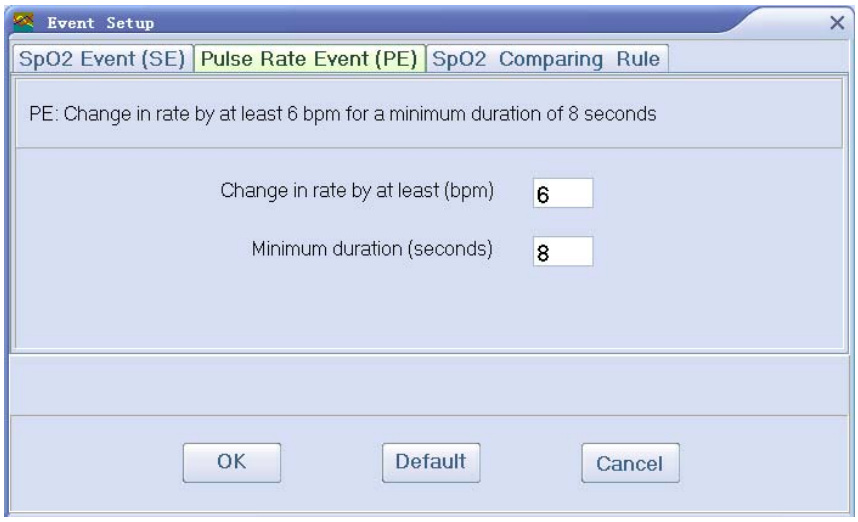
Figure 3-13 Desaturation Report

3.5 Settings

3.5.1 Event setup

On main menu window, select "Settings" to enter into Settings screen, as shown in figure 3-14.There are four tabs, click on the tab to shift page to its relevant page.





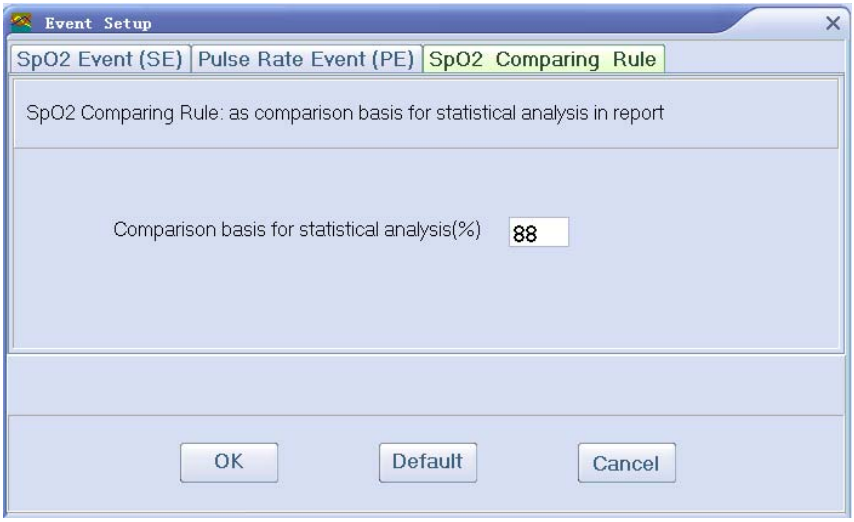


Figure 3-14 Event Setup

✧ **SpO_2 Event (SE)**

If the SpO_2 value exceeds the preset “drop in SpO_2 by at least (%)” and this status lasts not less than the preset “minimum duration (sec)”, it will be recorded as an event. For example, set “drop in SpO_2 by at least (%)” as “6” and set minimum duration as “8”, when drop in SpO_2 by at least 6bpm for a minimum duration of 8 seconds, SpO_2 event will be triggered and recorded as a SpO_2 event.

✧ **Pulse Rate Event**

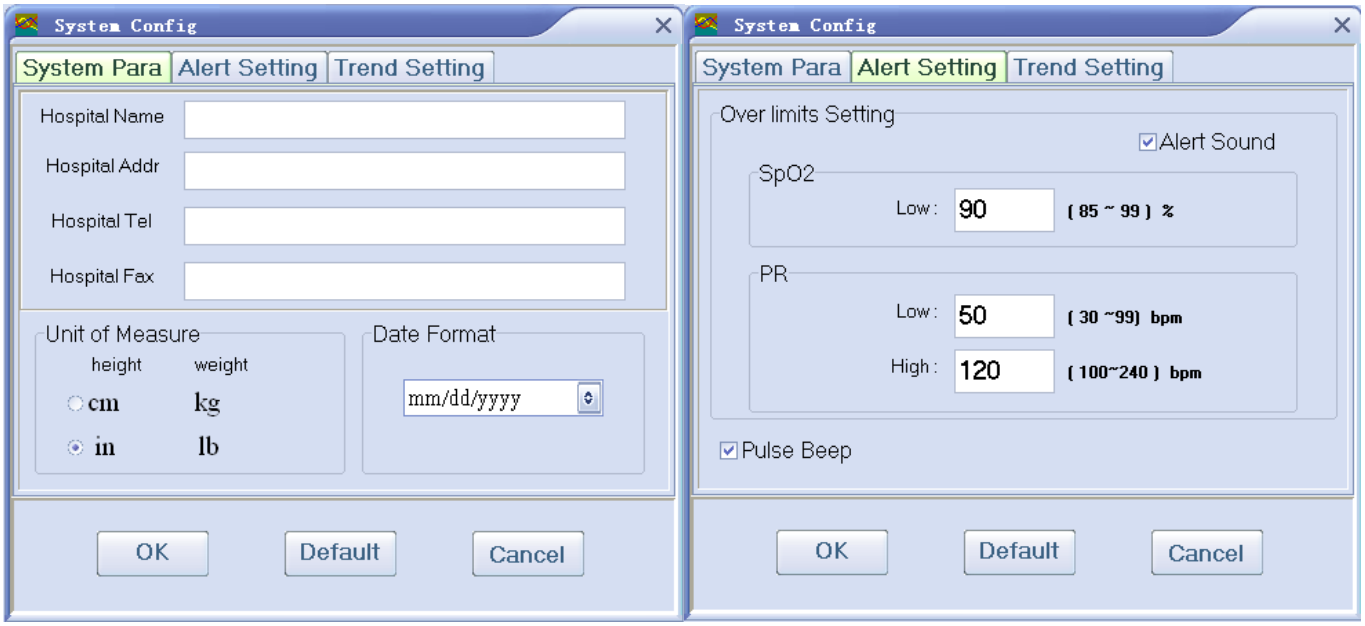
If the PR value exceeds the preset “change in rate by at least (bpm)” and this status lasts not less than the preset “minimum duration (sec)”, it will be recorded as an event. For example, set “change in rate by at least (bpm)” as “6” and set minimum duration as “8”, when change in PR rate by at least 6bpm for a minimum duration of 8 seconds, PR event will be triggered and recorded as a PR event.

✧ **SpO_2 Comparing Rule**

User can define a SpO_2 value as comparison basis for statistical analysis according to need. For example, if you set “Comparison basis for statistical analysis (%)” as “88”, refer to the report , we can get the the number of SpO_2 values and the SpO_2 values below 88% in measuring time.

3.5.2 System Configuration

On main menu window, select "System Configuration" to enter into System Configuration screen, as shown in figure 3-16. There are two tabs, click on the tab to shift page to its relevant page.



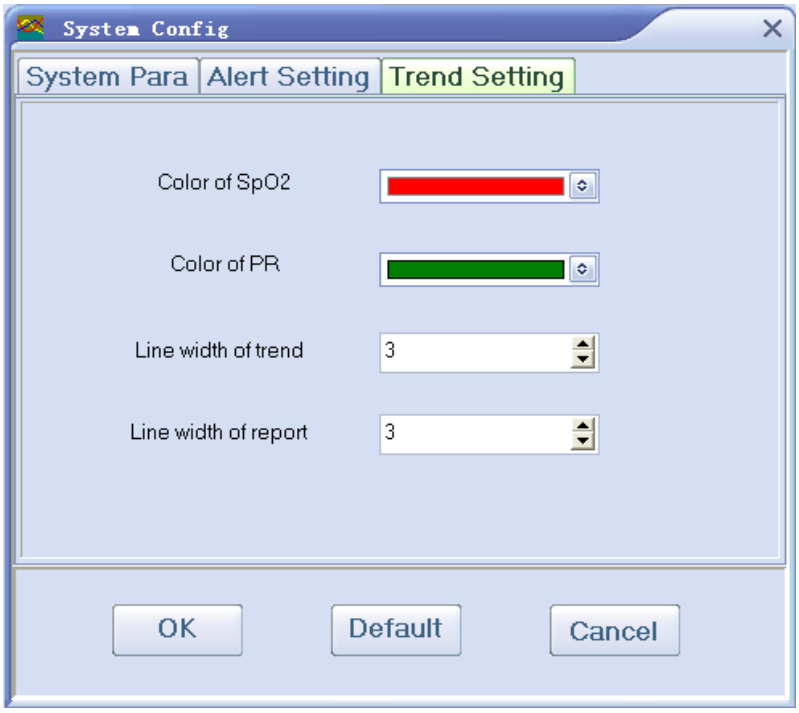


Figure 3-16 System Configurations

✧ System Parameter

➢ Hospital information: Enter into hospital name, address, telephone and fax

➢ Unit of Measure: Set the units of height and weight:

"in and lb." or "cm and kg"

Unit conversion: 1 cm = 0.39in 1kg = 2.2 lb.

➢ Data format: Select the data format.

The "mm/dd/yyyy", "yyyy/mm/dd" and "dd/mm/yyyy" format are optional.

✧ Alert Setting

➢ **Over limits Setting:** the high/low alert limit for SpO_2 and Pulse Rate, as well as the enable/disable setting for Alert sound.

➢ **Pulse Beep:** the Pulse Beep enable/disable setting.

✧ Trend Setting

➢ **Color of SpO_2:** for setting the color of SpO_2 trend curve (click "▼" and choose the color);

➢ **Color of PR:** for setting the color of PR trend curve;

➢ **Line width of trend:** for setting the line width of SpO_2 and PR trend curves displayed in the graphic trend area;

➢ **Line width of report:** for setting the line width of SpO_2 and PR trend curves on the report.

Error Codes

Error Codes	Possible Causes	Solutions
Please set the display resolution of the screen as 1024 x 768.	• Your computer's display resolution doesn't meet the application software requirement.	• Please set the display resolution of the screen as 1024 x 768, or higher.
Query term error. Please reenter.	• Incorrect or invalid term entered	• Reenter query term.
Please select Archive!	• No archive • No archive selected	• Please creative a new patient record. • Select an archive.
Please choose data to add!	• No record selected.	• Select records;
Fail to connect the OxiSensor, Please try again.	• SpO_2 probe is not connected well with PC USB interface; • The data cable is not connected well with OxiSensor; • USB interface damaged; • Data cable damaged; • The SpO_2 probe is of malfunction;	• Recheck the connecting condition between SpO_2 probe and PC; • Please re-install the software: OxiSensor Demonstrator and Data Logger; • Change a new one; • Please contact the local dealer; • Please contact the local dealer;
Can not find COM port, please install COM port!	• The data cable is not connected well with OxiSensor; • USB driver is not installed; • The SpO_2 probe is of malfunction;	• Make sure the connection of data cable is well at both side; • Please re-install the software: OxiSensor Demonstrator and Data Logger; • Please contact the local dealer;
Fail to real time measurement	• USB driver is uninstalled.	• Please re-install the software: OxiSensor Demonstrator and Data Logger.