

SpO2 Review User Manual v0.9

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About.

SpO2 Review is made to review saved SpO2 data. It can record data from device and review data saved in files.

About this manual

some word instructions :

Device : means 50E, 60C or other compatible pulse oximeter device unless mentioned otherwise.

Install

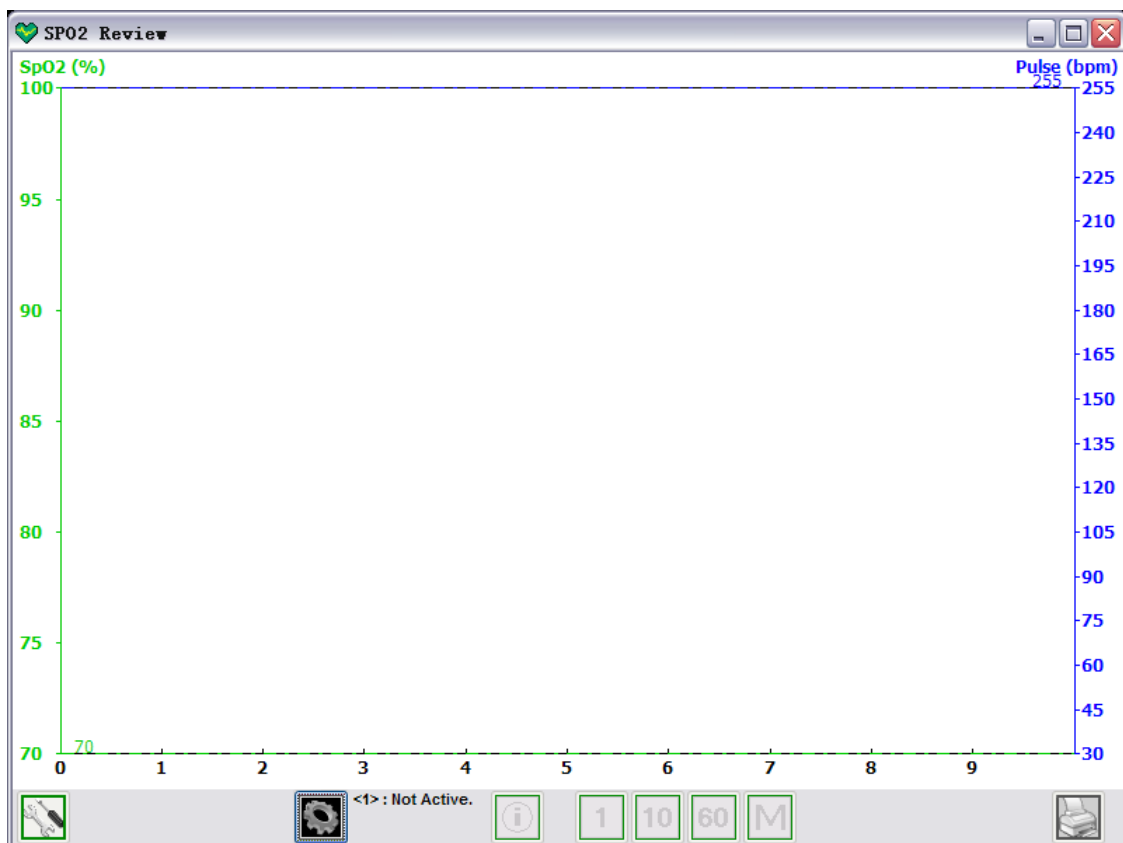
Please refer to the installation manual.

Usage.

Here you can quickly learn to use the SpO2 review software by following the steps below.


1. Start SpO2 review program.

When you install SpO2 software, by default, 2 shortcuts will be created on your desktop. double click the green one named "SpO2 Review". You will see the main window :

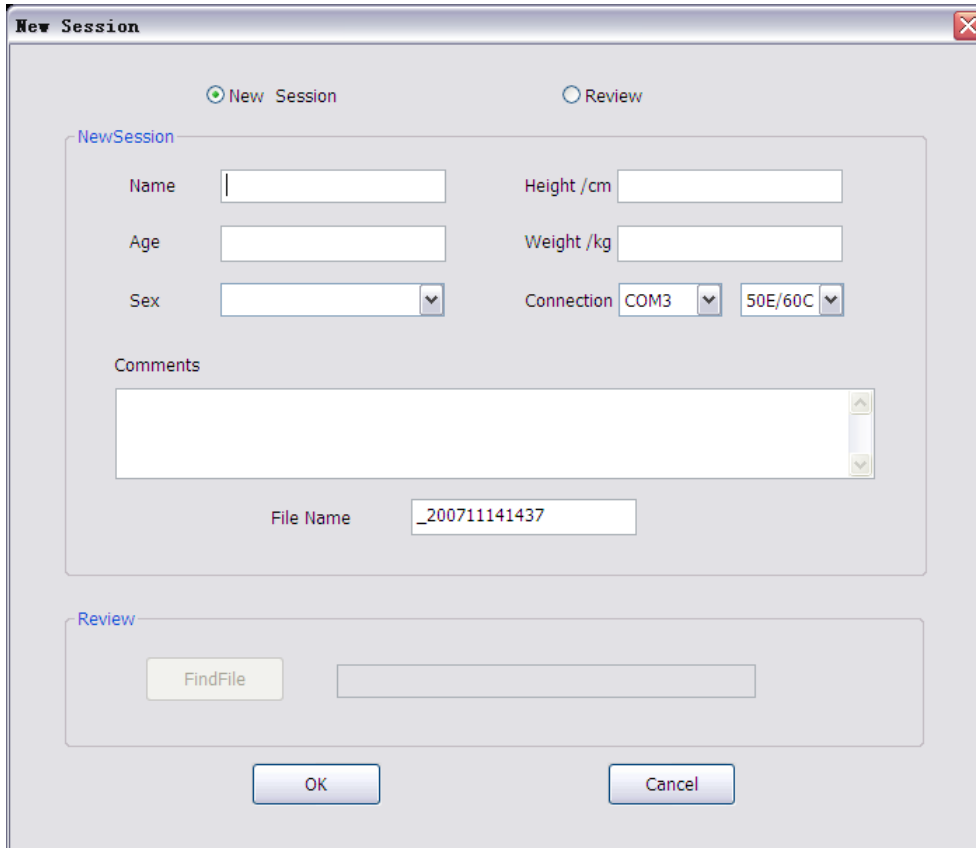


2. Record data.

Before recording data, make sure your device (pulse oximeter hardware) is connected to your computer.

Click on the new session button  and the new session dialog window will appear.

It looks like this (may differ according to different systems).



Fill in the forms : Name, Age, Sex, etc. The file name changes according to the name you entered, you can change the file name manually if you prefer another name.
(Please check your input carefully because you can not change them later.)

Then choose the connection. Choose your device type on right connection list. The left list is useful only when multiple devices of the same type are detected and it's your job to remember which is which.

When you are done with the input and choices, click “OK” button.

Now the program is ready to receive your data saved on the device. The new session button

will change its appearance to this :



Note : if you see the message saying “No device available” and the new session fields are disabled, check your hardware connection and make sure your device is connected to computer correctly.

If you already have saved data, you can choose the “Review” option on top, and in this mode, you use the “Find File” button to locate your data file, and click “OK”.

3. Upload data to computer.

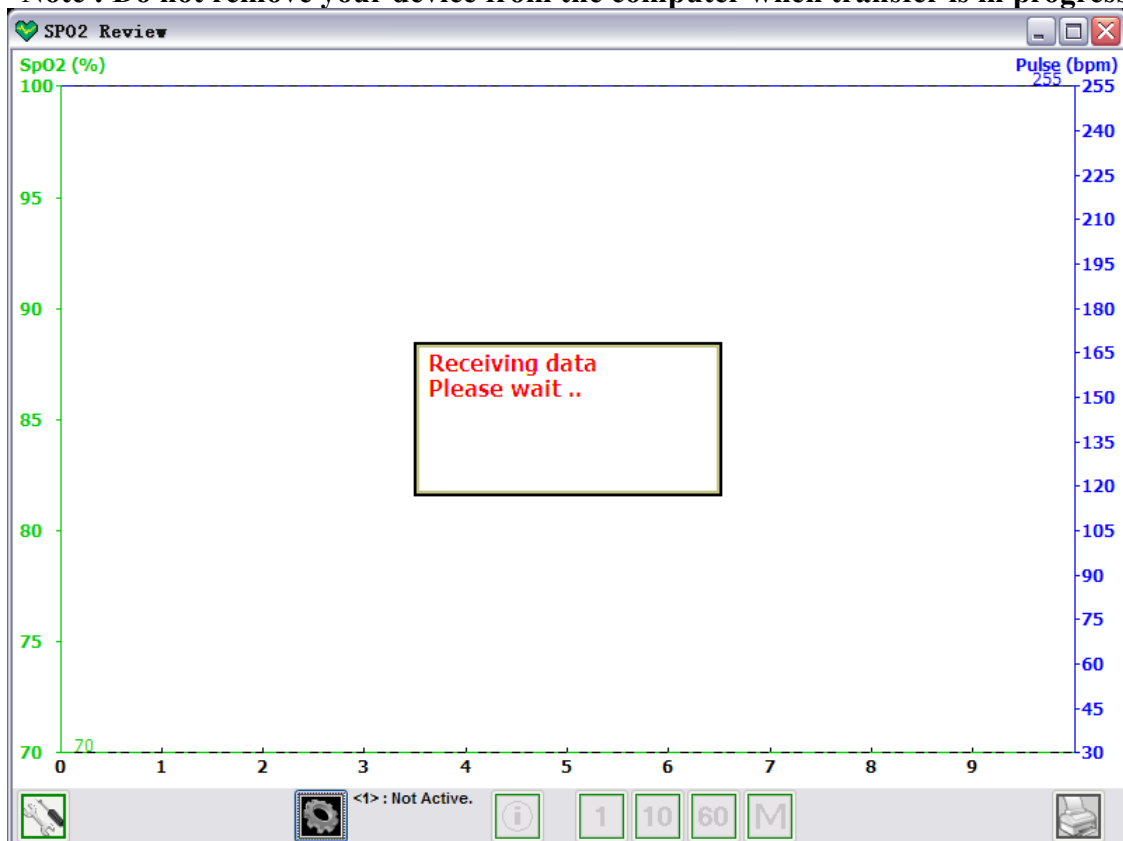
If you have chosen the “Review” option and opened your own data file, this step is ignored, and you should go to the next step : “[Review the data](#)”.

Use your device to upload data to your computer, please refer to the device manual if don't know how to do that.

When data transfer starts, the program will display a message, you just need to wait until the transfer is done. It may take several minutes if you have a long time of data saved.

The following window is the window with message shown.

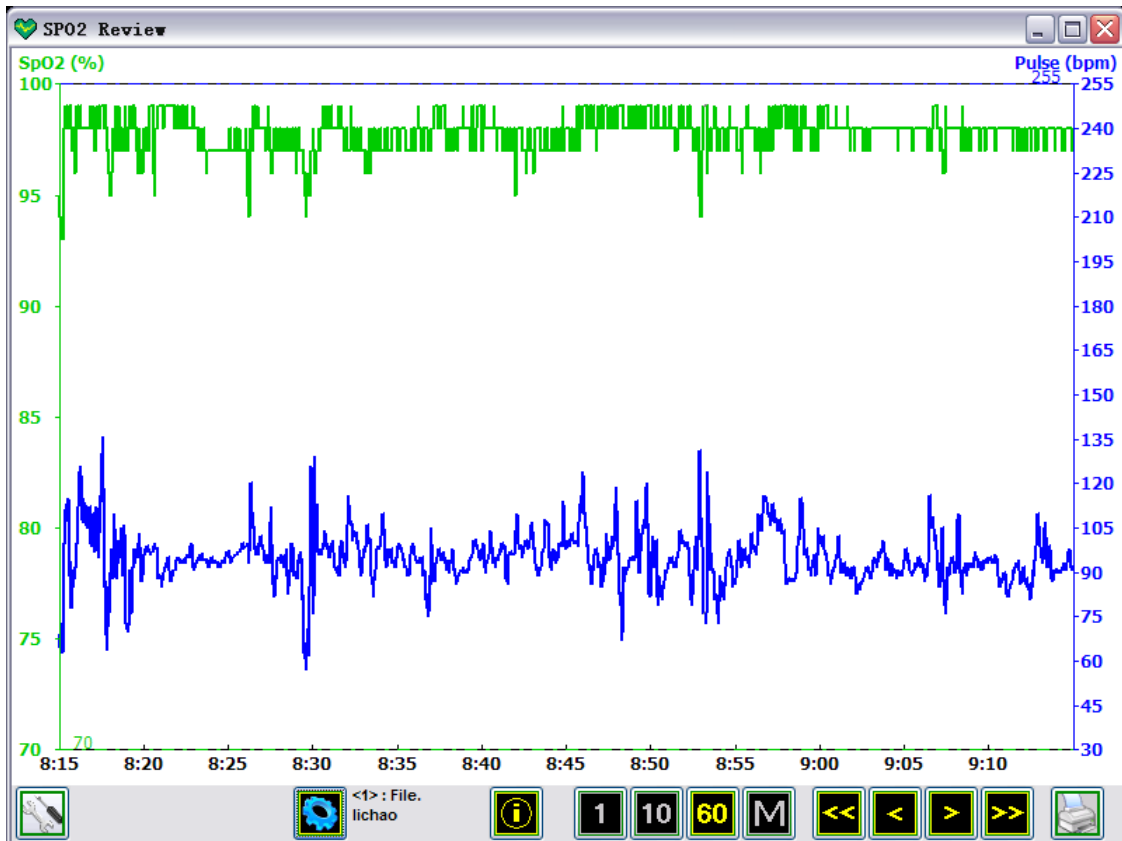
Note : Do not remove your device from the computer when transfer is in progress.



4. Review the data.

When the transfer is done, the data will be saved to a file (the file name is specified on the new session dialog), and the file will be loaded automatically.

The window with data looks like the following :



Until now, all other buttons are either disabled or hidden. Now let's take a look at them.

This 4 buttons **1** **10** **60** **M** are used to set the page length, that is how long data will be visible at the same time in the window area from left to right.

“1” means 1 minute, “10” means 10 minutes, and “60” means 1 hour, while “M” means manual set, a dialog will show up, and you can set the length to any minutes. In the picture above, the “60” is in yellow while others are in gray, which means currently 60 minutes is selected.

This 4 buttons **<<** **<** **>** **>>** are used to move the data offset, that is what time is it at the left of the window.

The “<<” and “>>” buttons move the offset back or forth by page length. So, if you select “60” as the page length, “>>” will move data time forward by 1 hour.

The “<” and “>” buttons move the offset back or forth by step length. Step length is smaller than page size, 1 page (the window width) often contains several steps, the steps are marked in the data area, and the time line is marked each step length. As you can see, the step length of the picture above is 5 minutes, and a page contains 12 steps.

Look the graph below, it's not from the program, but it shows you the functions of the buttons we mentioned above.






Here the whole blue bar indicates all your data, let's say it's 5 hours long, the exact number does not matter here. Within the green edge is one page (maybe 1 hour of data), and it's the

page that is currently on your screen that you can see.

And the green edge area (page) can be moved and resized.

The page length buttons set the width (length) of the page, and the offset buttons set the left position of the page.

This button  is the information button, click on it, and a dialog box will appear to show the patient information.

The left button  and the right button  are the analysis and print buttons. They are used to analyze the data and print analysis reports. To know more about analysis, see [Analysis](#) and [Analysis parameters](#).

5. More details, the data display area.

The whole rectangle area with white background is the data display area. The following picture show different parts of the data area.



Right click in the data area, you will see a gray time line, and on top of the data area is the "Data Detail", where you will see the exact SpO2 and pulse value according to the time. Keep the right button down and move your mouse, the value will change accordingly.

The SpO2 and pulse ruler lines show the exact value of the horizontal lines. You can move the ruler lines by right clicking on the left or right edge (Ruler areas).

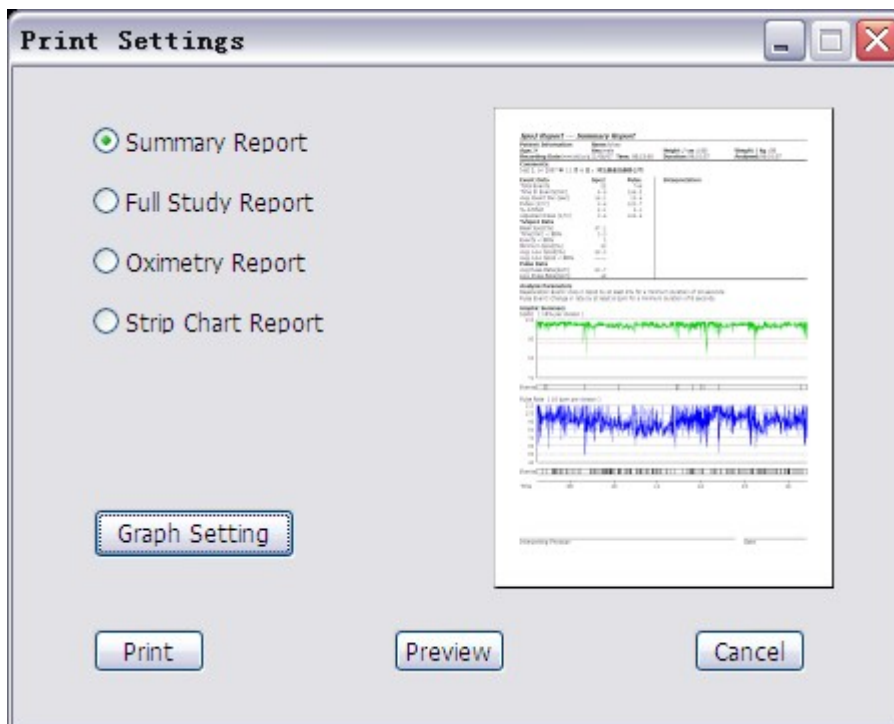
6. Analysis

SpO2 review program can analysis the data and print different analysis reports. It does some basis statistical analysis as well as SpO2 and pulse events analysis.

SpO2 desaturation event is defined as drop in SpO2 by at least N% for a minimum duration of L seconds. N and L are configurable, and is defaulted to 4 and 10.

Pulse event is defined as change in pulse rate by at least N bpm(beats per minute) for a minimum duration of L seconds. N and L are configurable, and defaulted to 6 and 8.

When you click the print button, the print option dialog appears.



There are up to 4 types of report are available for printing, a small demo picture preview is on the right as you choose a report type:

1. Summary report: a data summary of the data during the whole monitoring period. This report is a one-page summary focusing on event data as defined by analysis parameters. It contains five sections:
 - ◆ Patient Data.
 - ◆ Numerical Data Summary .
Detailed event data and statistical analysis.
 - ◆ Analysis parameters.
 - ◆ Graphic Summary.
Includes a graphic summary of SpO2 and pulse rate data. A red dotted line on the SpO2 graph indicates the threshold as set in analysis parameters.
 - ◆ Physician Signature Block
2. Full study report : full graphical representations of all data, it requires as many pages as need according to the data and the selected page length.
3. Oximetry report : a data summary of the patient during the monitoring period. It's a

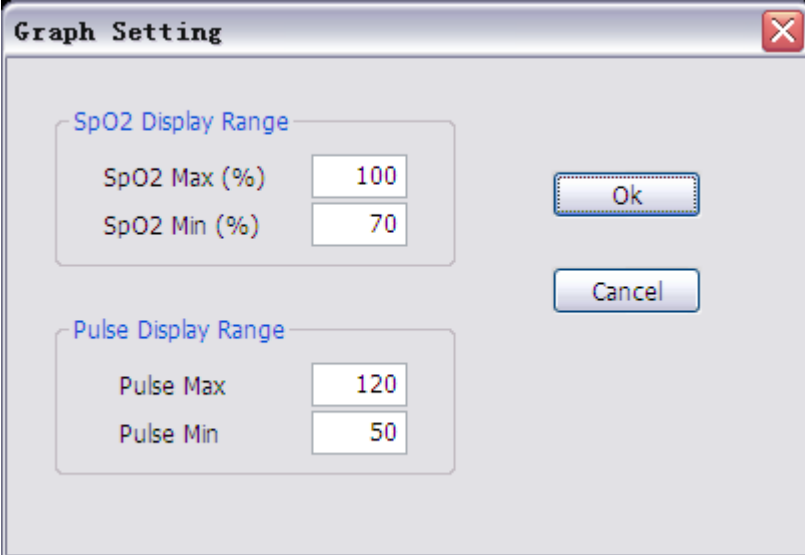
one-page summary focusing on event data as defined by the analysis parameters. It contains four parts :

- ◆ Patient data.
- ◆ Numerical data summary.
Detailed event data and statistical analysis.
- ◆ Analysis parameters.
- ◆ Graphic summary.
Includes a graphic summary of SpO2 and pulse rate data. A red dotted line on the SpO2 graph indicates the threshold as set in analysis parameters.

4. Strip chart report : a summary of data currently visible on screen.

Use the “print” button to print the report, you can also “preview” button to preview the report. Click “cancel” if you do not want to print any report.

Use “Graph Setting” to customize the print report display. By default, the SpO2 data is limited to the range of from 70 to 100, and pulse rate data is 50 to 120. You can change the limitation in the graph setting dialog.



The image shows a dialog box titled "Graph Setting" with a close button (X) in the top right corner. The dialog is divided into two sections: "SpO2 Display Range" and "Pulse Display Range".

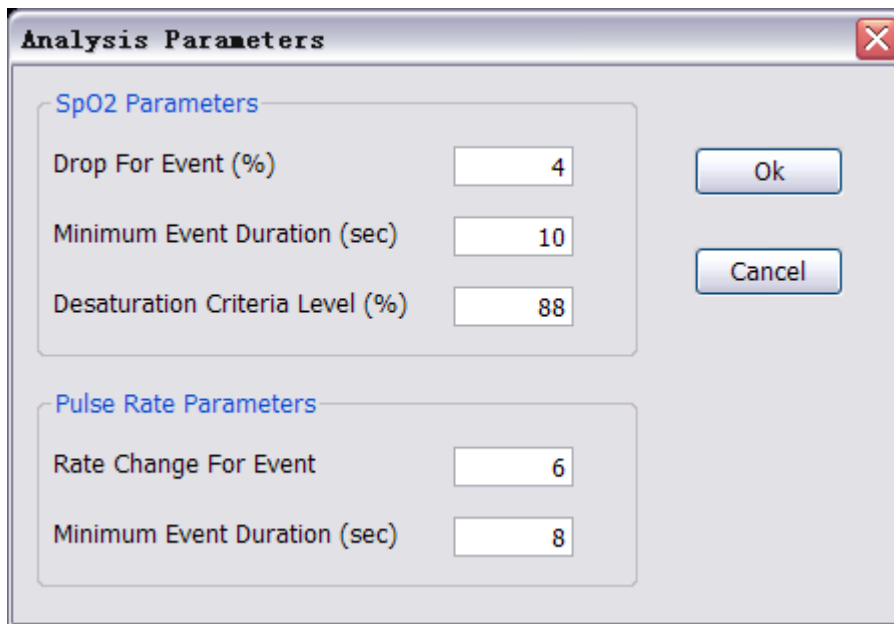
Parameter	Value
SpO2 Max (%)	100
SpO2 Min (%)	70
Pulse Max	120
Pulse Min	50

On the right side of the dialog, there are two buttons: "Ok" and "Cancel".

Reference

Analysis parameters

Use the analysis option button  to set the analysis parameters.



Parameter	Value
SpO2 Parameters	
Drop For Event (%)	4
Minimum Event Duration (sec)	10
Desaturation Criteria Level (%)	88
Pulse Rate Parameters	
Rate Change For Event	6
Minimum Event Duration (sec)	8

SpO2 Parameters

- ◆ Drop for Event (%): value, in %, to qualify as an SpO2 (Desaturation) Event.
- ◆ Minimum Event Duration (sec): value, in seconds, of SpO2 decrease that qualifies as an SpO2 (desaturation) event.
- ◆ Desaturation Criteria Level (%): value, in %, below which the SpO2 level must drop to be classified in a special category of statistics. This threshold is indicated on the SpO2 graph by a red dotted line.

Pulse Rate Parameters

- ◆ Rate Change For Event (bpm): value, in beats per minute, to qualify as a pulse rate event.
- ◆ Minimum Event Duration (sec): value, in seconds, of pulse rate change to qualify as a pulse rate event.

Click “OK” to set new analysis parameters or click “Cancel” to leave them unchanged.