

Sleep Fairy

User Manual



VentMed Technology Co., Ltd

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Symbol Description:



BF Application Part

SN

Serial Number

User Manual

1 Application

Sleep Fairy device is a set of respiratory physiology data collection, display, storage and analysis instrument, can be used for the analysis and screening of sleep disorder patients. This device use Windows XP or Windows 7 software platform, with excellent circuit and exquisite design/rational structure/safe and flexible operation.

The product included Main Device, Fixing Band, SpO2 Sensor, Analysis Software, SD Card. Can record Snore, Airflow, Chest and Abdomen movement, body movement, SpO2, Pulse, Body Position and CPAP pressure.

2 Range of Application

The Product can be used to access, display, storage and analysis of respiratory events, auxiliary diagnosis of sleep disorders. The product can use in hospital or home under the guidance of physician or professionals.

3 Contraindication

This product is not used to unstable life signs of serious patients and suspected openness infectious disease patients, is not used for real-time monitoring.

4 Matters Need Attention

Please read below points carefully and follow strictly when you use this device :

1. Need use under the guidance of physician or professionals.
2. Use accessories with registration certificate only.
3. Please contact retailer in time when device could not work correctly.
4. In order to ensure safe , please carefully read the following content:
 - a) Please do not boot up when the device enclosure or cable damage 。
 - b) Please do not open the device enclosure. Please contact authorized

retailer if need maintain.

- c) Please keep the device dry, do not use in wet room or bathroom.
- d) Please keep the device away from water source, such as bath tub and water glass etc.

Sleep Fairy device obtain and keep whole night sleep data from sleep recorder raw data. The device will generate incorrect data if something happened in use process such as power off, data lost, human interference signal, strong electromagnetic interference and improper sensor use.

- This device is no alarm for SpO2 and pulse.
- This device is not a life support system, is not suitable for sports environment .
- This device need use under physician guidance.
- Use accessories with registration certificate only, such as nasal oxygen tube.
- If this device is exposed to extreme heat or cold environment, this device should be placed in room temperature environment around 2 hours to make the device temperature same as room temperature before use.
- This device use rechargeable lithium battery only. When power is low, please charge in time. Otherwise could not record data. Please make sure the device is power off when do not use device long time.
- If use other battery not provided by our company, we will not be responsible for any liability.

5 Warning

This device may be interfered or influenced when operate in following environments:

- **The operation of high frequency device (diathermy)**
- **(electric shock)Defibrillator or shortwave therapy device**
- **Radiation(such as X-ray, CT)**

- electromagnetic field(such as MRI)

Do not use this device in MRI environment or high EMI source environment.

This device is not suitable for air contains flammable, anesthesia, nitric oxide gas mixture environment.

Do not use high pressure steam to clean this device.

Do not put this device into water.

Do not put liquid on or beside this device.

Please stop use and replace in time when any device parts damage.

This device need maintain by professionals or manufacturer. Do not open device to replace parts by user self.

6 Exclusion of liability

We are not responsible for below contents caused device damage without our company permit:

- Individuals change without authorization, expansion function and repair.
- Use we do not recommend or without register attachment and parts.
- Do not follow this instruction manual to use device.

7 Clean and Maintain

Device enclosure cleaning:

Attention: Do not put device in liquid or let liquid into device.

Use soft and wet cloth to wipe the surface, can use small amount of neutral detergent when necessary, please do not let water into device.

Before using again, should guarantee device has been completely dry.

Sensor cleaning:

Nasal airflow sensor is disposable material, do not reuse.

Please use alcohol to clean SpO2 sensor.

8 Repair

If the device damage, please contact service center. Maintenance service work can only be implemented by our company authorized technical engineer. In order to ensure the device can use for a long time, the user must follow the device safety and cleaning and maintenance guidance, correct use and maintenance can be useful for device work normally, prolong the working life of the device.

Disconnect the power before maintenance.

- 1、 System device need keep by personnel management.
- 2、 The device and all sensor need store in dry environment , to prevent damp, corrosion, away from strong electromagnetic interference source.
- 3、 This device has been accurate adjustment, it is forbidden to free disassembly and adjustment by user self.
- 4、 If found device is abnormal or does not work, please contact manufacturer or local maintenance department, it is forbidden to free disassembly.

9 Waste Treatment

Exclusion of specially assigned used device parts and pack, other parts please follow country relative laws and regulations to dispose or send back to manufacturer.

10 Quality Guarantee

Every device and accessories are completed, function is normal and accord with specifications on construction manual before ex-factory. From the date of purchase, main device is one year host warranty non-artificial damage. Performance fault occurring within 7 days, can choose to return, replace or repair.

Our company do not undertake loss caused by user misuse, abuse or accidents.

Water into device caused by improper use is outside of the warranty.

Without the consent of the company cannot take device apart, otherwise as the

Sleep Fairy

user to give up the warranty.

Please follow local relative laws and regulations to dispose waste accessory and device or send back to manufacturer.

Chapter One Product Description

1 Sleep Fairy Main Device



Attention: Sensor must connect correctly.



Attention: Sensor interface does not cover or block.

2 Main Feature and Technical Index

(1) Main Feature

The device is suitable for the Microsoft's Windows XP, Windows 7/8/10 system, support 32-bit and 64-bit operating system, with functions of case management.

- (1) With the function of recording and storing snore、airflow、chest and abdomen movement、SpO2、pulse、body position、body movement、CPAP pressure.
- (2) With the function of selecting screen time width and adjusting the waveform amplitude.
- (3) With the function of analyzing breath events.
- (4) With the function of auto generating breath event structure plot、SpO2 trend plot、snore distribution plot.

(2) Technical Index

Body Position: can display patients sleep position included supine 、 prostrate 、 left side 、 right side.

SpO2 Range(%SpO2):70%-100%;

SpO2 Tolerance(%SpO2):

SpO2 is equal or higher than 80%, Tolerance \leq 2%;

SpO2 is between 80% and 70%, Tolerance \leq 3%;

SpO2 is below 70%, Not required.。

Pulse Range : 20-255bpm

Pulse Tolerance : \pm 3bpm

Main Device Character:

Dimension	125*80*24(mm)
Weight	176g(excluded sensor weight)
Enclosure Material	ABS plastic

Technical Index :

A/D Connect	12 digit
Memory Capacity	Over 50 hours
SD Card Communication Mode	8G
Record time	Full charge of battery can work continually over 20 hours

Power : Rechargeable lithium battery

Prevent electric shock type: Internal power supply

Prevent electric shock level: BF apply part

Protection degree of harmful liquid: Common device, IPX0

Fuse Protector: None

Operating Mode: Continuous operating

Operating Condition: Ambient temperature: 10°C \sim 40°C

Relative humidity: 30% \sim 80%

3 Store and Transportation Condition

Ambient Temperature: -20 °C ~ +55 °C

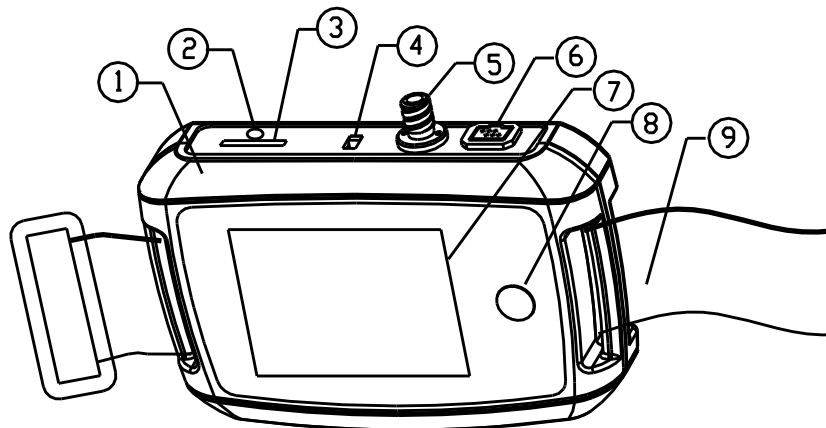
Relative humidity: 10%~95% (non-condensing)

Barometric pressure: 500hPa~1060hPa

4 System Configuration Requirements

- Over 10GB usable hard-disk space
- Over 2GB RAM memory
- Over 2GHz basic frequency CPU
- Windows XP、Windows7 or above system, Support both 32-bit and 64 - bit operating system

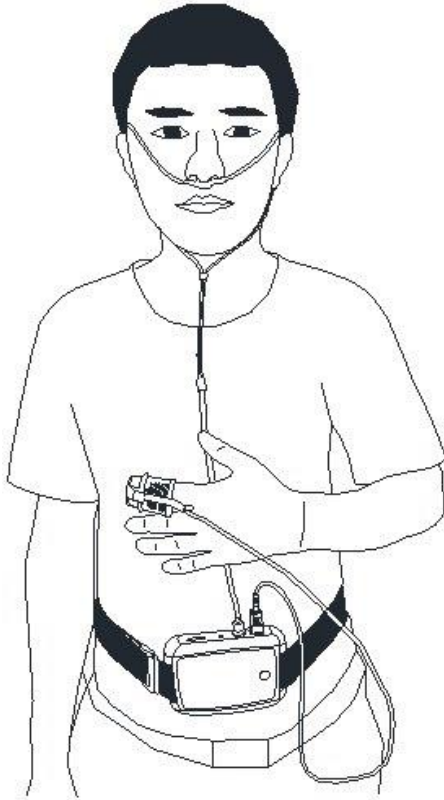
5 Panel control and external port



①	Main Device	⑥	SpO2 Sensor port
②	Outlet	⑦	Display Screen
③	SD Card Connector	⑧	Screen lighten button
④	Switch	⑨	Fixing Band
⑤	Airflow Port		

Chapter Two System Installation

1 Hardware Installation



Be careful to Dismantle the outer packing, check device and all accessory in packing list are complete. If there is any defects, please contact supplier or manufacturer in time.

Whole device connection and wearing as left picture **(Attention : All Operation must complete before power on)**

- Fixing Band: Take fixing band through the device to fix on abdomen, according to the personal comfort level adjust tightness.
- SpO2 Sensor: Attach SpO2 Sensor in the ring finger (other fingers are also fine), in order to avoid Spo2 Sensor fall out when patient is in sleep , suggested to use tape to reinforce.
- Nasal Oxygen Tube: Nasal oxygen tube style mouth/nasal airflow sensor placed in the patient's nose. In order to avoid fall out in sleep, suggested to use tape to reinforce on both sides of nose.

Attention: Avoid liquid into catheter.

2 Software and Driver Installation

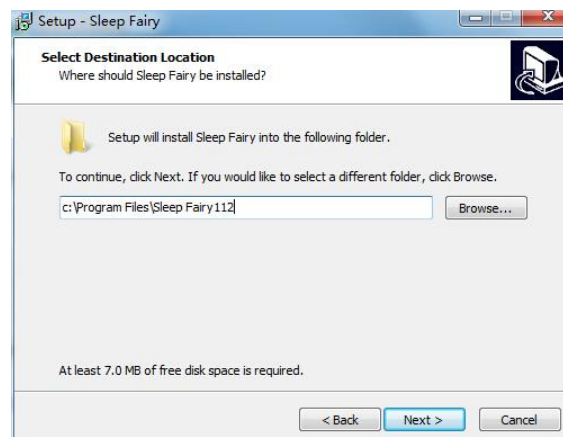
Insert the install disk into the CD-ROM driver.

The installer will automatically start in 60 seconds. If do not start, can run executable program Dataviewer.exe in disk installation directory for installation.

The first step: Double-click the file, click “Next” start installation;

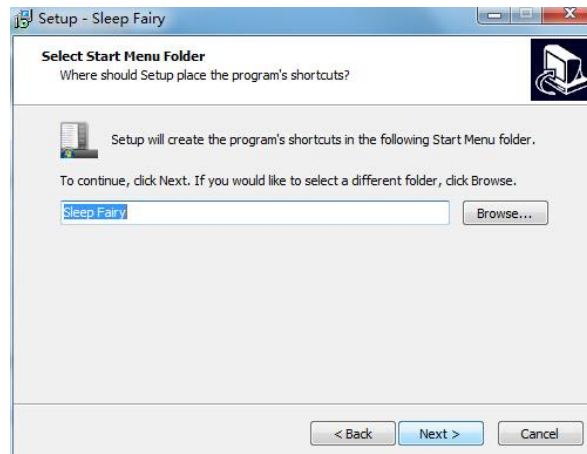


The second step: after finished set route, click” Next” to continue install;

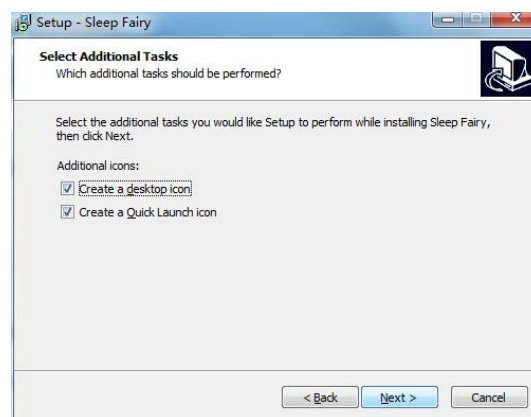


Sleep Fairy

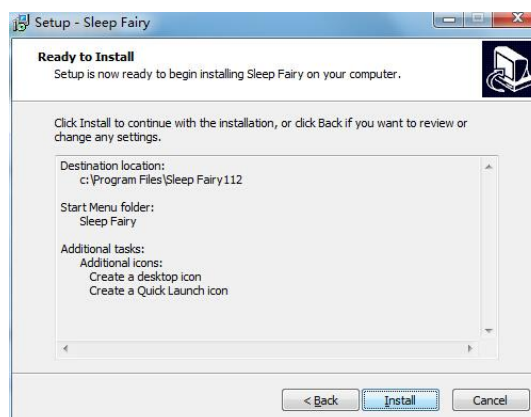
The Third step: after finished set shortcut route, click “Next” to continue install;




The fourth step: after finished set shortcut route, click “Next” to continue install;



The fifth step: click “Install”;



System program menu will have a "Sleep Fairy" shortcut, also will appear the

corresponding shortcut icon on the desktop .

Chapter Three Device Usage

1 Data Record

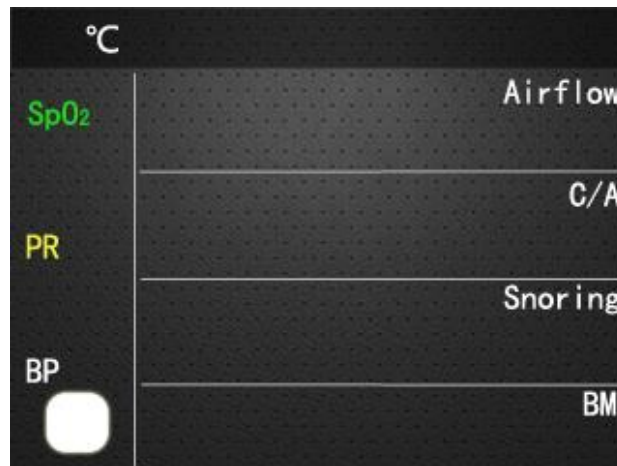
(1) Insert SD card into the device correctly, will show below capture if do not insert SD card;



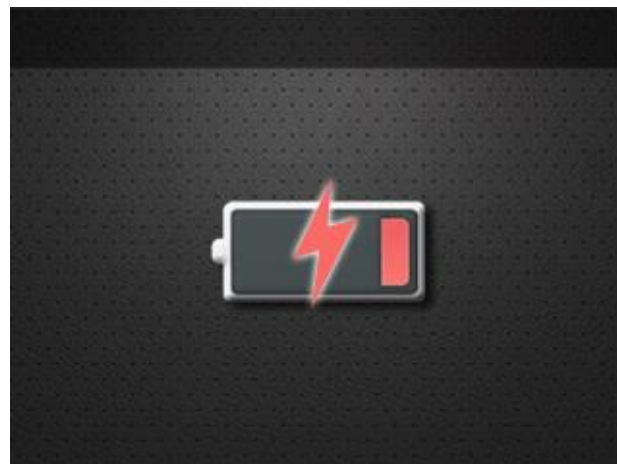
Warning: Pay attention to SD card insert direction is correctly(make sure SD card insert direction matched SD card instruction icon direction. Otherwise, SD card is easy to damage and could not work).



(2) Switched to “ON” position, screen light as below picture:



(3) Full charge the battery before sleep test, when screen will display low battery warning, stop use and charge the battery:



(4) Wearing airflow and SpO2 sensor, secure two signals normal.

(5) In the case of the button is not pressed, the screen will lower brightness after 60 seconds, blank screen after 15 seconds later. If you need to check the signal, just need to press the button on the side of screen, screen will light up;

(6) The device will begin recording the data after 5 minutes;


(7) After data recording is finished, turn off the switch.

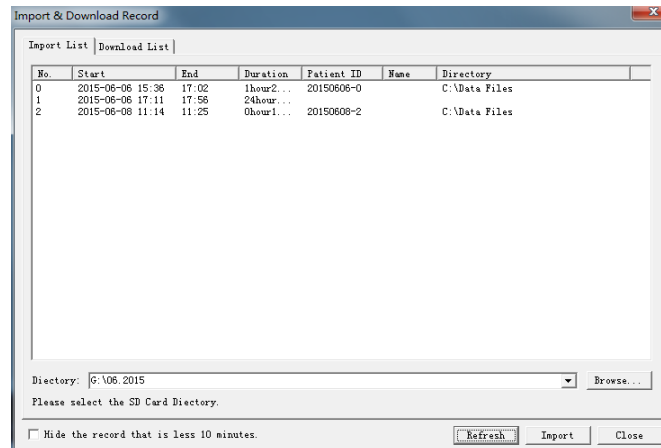
2 Import Data

(1) Power off the device(make sure switch is “off” position)before remove SD card;

(2) Push in the SD card to release it from device;

Sleep Fairy

- (3) Insert SD card into SD card reader, connect SD card reader to computer
- (4) Open Sleep Fairy Dataviewer software, click “New record” or “” button, select SD directory to import record list from SD card. The bottom record is the newest record. Select the record item needed import to double click or click “Import” button.



- (5) New case information window will pop up, input the case information in the window. Click “OK” to browse data.

Patient ID: 20150608-2
Start: 2015-06-08 11:14
End: 11:25
Duration: 0hour12min
Modify Record Time

Person Information

Name: _____ Sex: 1-Male 2-Female

BirthDay: 1900/ 1/ 1 Age: _____

Weight: _____ kg Height: _____ cm

BMI: _____ Neck: _____ cm

Tel.: _____ E_mail: _____

Addr.: _____

Comment: _____

Save to: C:\Data Files Browse...

OK Close

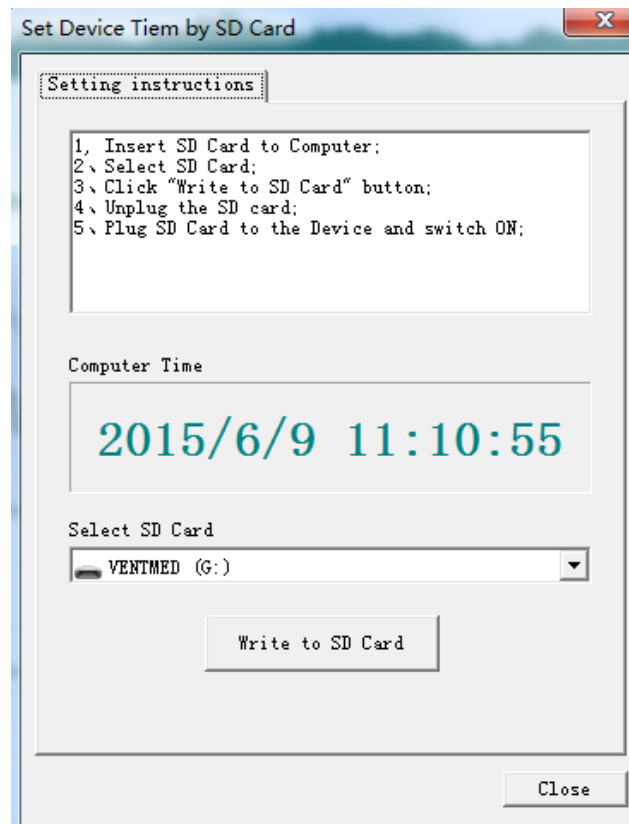
- (6) Case browsing Window.

Open a case data:



3 Set device time by SD card

Click “Set device time by SD card” in “Option”, select SD card directory and click “ Write to SD card” button. Unplug the SD card from PC and plug SD cad to the device within 1 minute in order to secure the device time is accurate with PC time.



Above oscillogram have following toolbar:



Create a new case—click to create a new case, input patient name, age, etc. information;



Open the case—click to open the existing case;



Scan data file—automatic analysis of nasal airflow, Spo2, body position etc. information, check the data summary and case information;



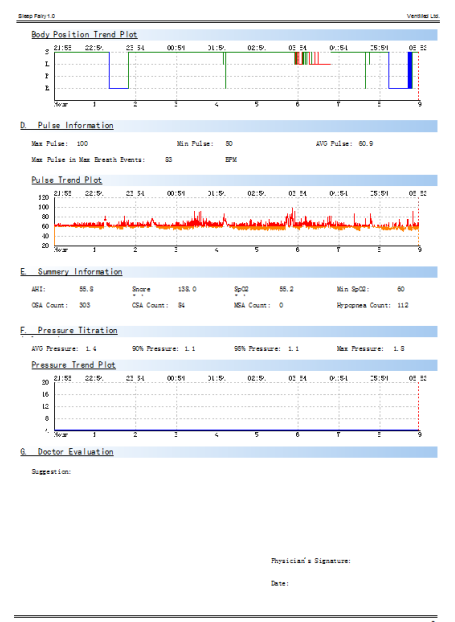
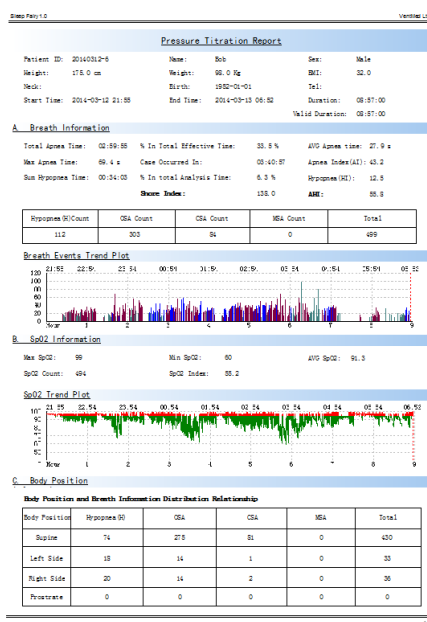
Trend Plot Switch—click to open or close trend plot;



Exclude Artificial - automatically exclude the disturbance of case;



Report forms—can select to open sleep monitoring report, SpO2 Summary, comprehensive Trend Plot, Pressure Titration Report, below capture sleep monitoring report in default report template :



Lamp off—Create lamp off event at current position. The event before lamp off is invalid data, the event after lamp off is valid data;




Lamp on—Create lamp on event at current position. The event before lamp on is valid data, the event after lamp on is invalid data. Lamp off/on events can

create several times to delete invalid parts in data;

30s 60s 2m | 5m 10m Time duration adjustment—click to select time duration.

⏪ ⏩ | 57 | ⏴ ⏵ Page Navigation—Click to check “previous page” and “next page” information;

 Case information—click to check case information and sleep data information.

(7) Restart device if needed record new data.

Breath Events Analyze

General Rules

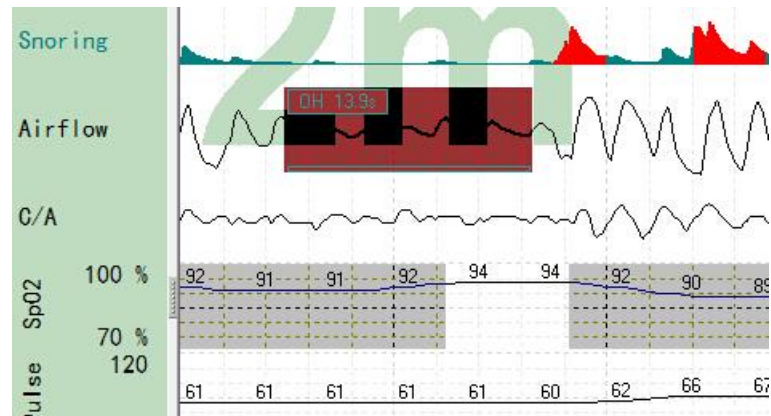
- All breath events must continue 10 seconds at least.
- All events must be 3% SpO2 decline at least.

Hypopnea

- Airflow lower than the baseline value about 50%, and continue over 10 seconds
- SpO2 decline $\geq 3\%$ or micro awakening
- Usually breathing hard gradually increased

How to judge hypopnea is sleep apnea

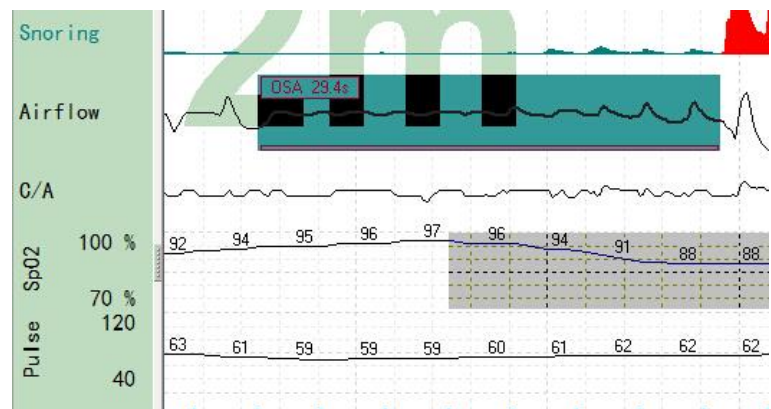
- SpO2 lower than baseline 10% can be judged is sleep apnea.
- Same physiological results as sleep apnea.



Sleep Apnea Type:

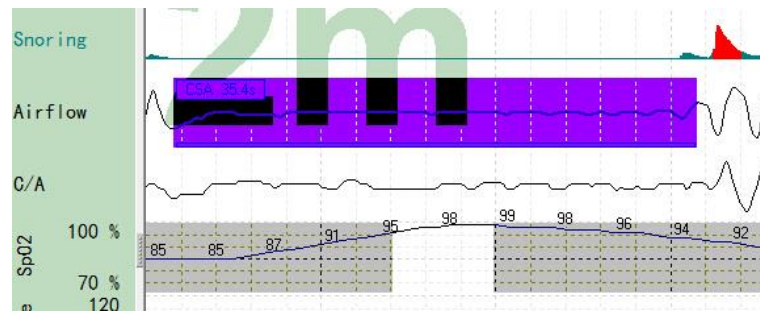
(1) OSA (Obstructive Sleep Apnea)

- Airflow stop ≥ 10 seconds.
- Forced breathing. Paradoxical breathing is usual.
- SpO2 decline $> 3\%$ (adjustable)



(2) CSA (Central Sleep Apnea)

- Mouth/Nasal airflow stop ≥ 10 seconds
- Completely lack of the following breathing movement:
 - Chest/Abdomen expansion
 - Intercostal muscles/diaphragmatic muscles EMG
- SpO2 decline $> 3\%$

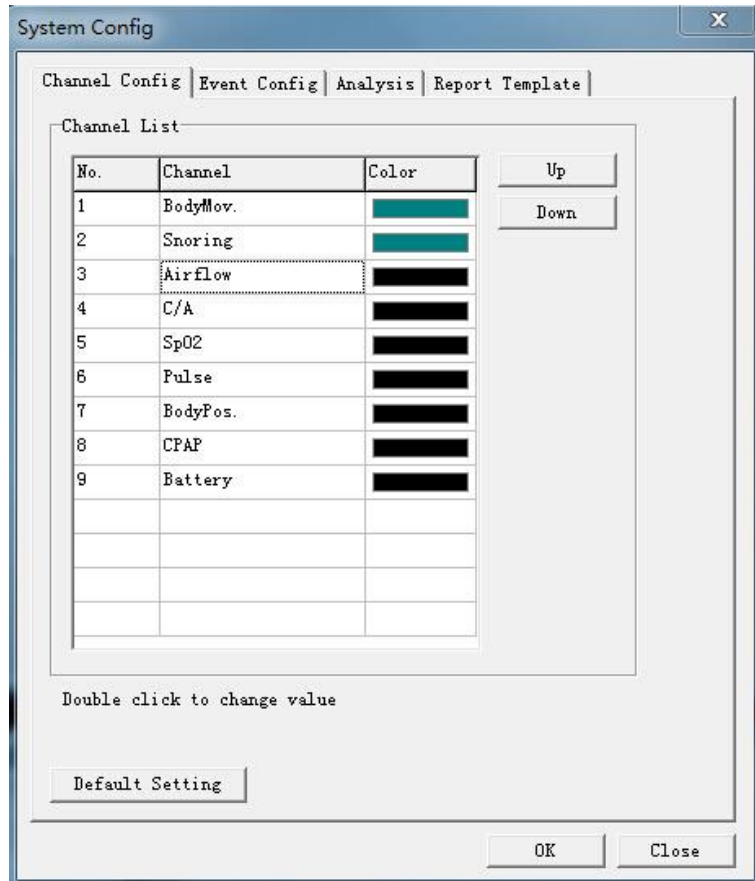


(3) MSA (Mix Sleep Apnea)

- Mouth/Nasal airflow stop completely
- No breath movement at beginning event, then breathing strength gradually increased, and eventually eliminate apnea
- Oxygen desaturation >3%
- Have short or long central component
- Same as all events, can be longer during REM continuous period.
- Over ventilator after OSA can cause MSA.

System Config

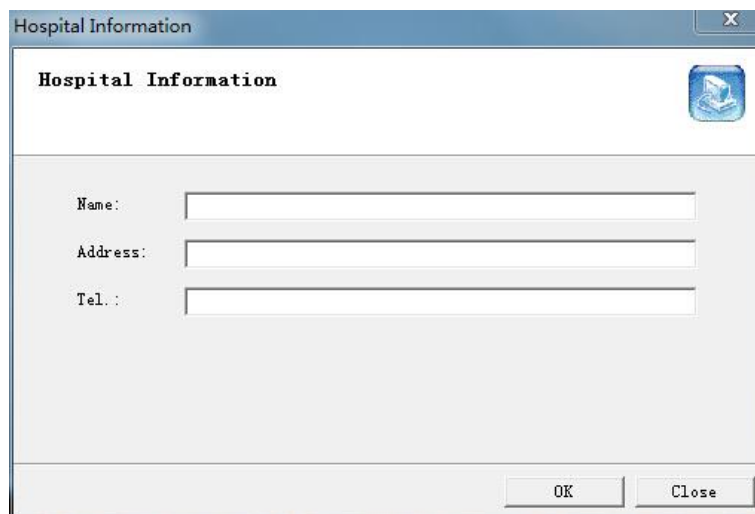
Click "Option", Choose "system Config", can view and edit "Channel Config", "Event Config" and "Analysis", can adjust the color and sequence.



“Analysis Parameters” can respectively setup upper and lower limit for oxygen desaturation, respiratory events and snoring parameters.

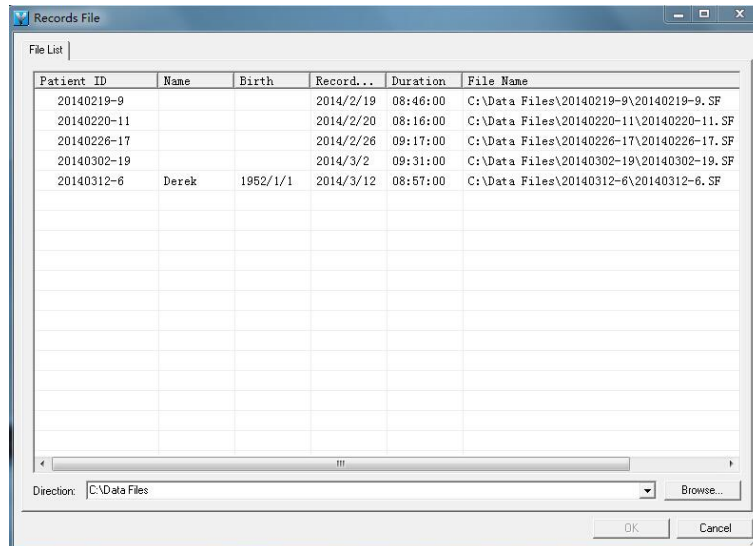
Hospital(Sleep Center) Information

Click “Option” to choose “Hospital Information” to setup user information, in order to show on the subject of report. Refer to below capture:




3 View Data

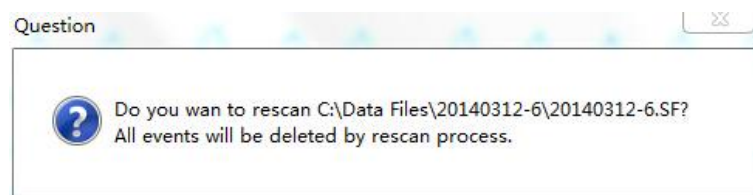
Click “File” to choose “ Open”, will popup below capture, select the data to double click to open.



Scan File

Scan program can be used to analyze the data in sleep files, click scan icon above oscillogram  to start scan, stored waveform identification information for later use.

Attention before rescan: All events will be deleted by rescan process, system will popup below capture for confirm “Yes” or “No”.



View Trend Plot

Open one sleep data file, Sleep Fairy Trend Plot included:

SpO2 Summary Trend Plot

Body Position Trend Plot

Body Movement Trend Plot

Pulse Trend Plot

Snoring Trend Plot

SpO2 Event Trend Plot

Breath Event Trend Plot

CPAP Pressure Trend Plot


Breath Information Summary

SpO2 Summary

Two kinds of trend plot are provided to view: Comprehensive Trend Plot and Single Trend Plot. Can view multiple single trend plots in one window, Comprehensive Trend Plot can view eight trend plot.

(1) Comprehensive Trend Plot

Below capture is default report form sample

- 1) Open a case and click “Reports ” to choose “Sleep Monitoring Report” then can view connection between sleep data and trend plots.

Sleep Monitoring Report

Patient ID: 20140302-19 Name: Sex: Male
 Height: Weight: BMI:
 Neck: Birth: Tel:
 Start Time: 2014-09-02 21:41 End Time: 2014-09-03 07:12 Duration: 09:31:00
 Valid Duration: 09:31:00

A. Breath Information

Total Apnea Time: 04:12:54 % In Total Effective Time: 44.3 % AVG Apnea time: 30.0 s
 Max Apnea Time: 117.8 s Case Occurred In: 01:55:02 Apnea Index(AI): 53.1
 Sum Hypopnea Time: 00:11:48 % In total Analysis Time: 2.1 % Hypopnea (HI): 2.8
 Score Index: 54.7 AHI: 55.9

Hypopnea (H) Count	OSA Count	CSA Count	MSA Count	Total
27	495	10	0	532

Breath Events Trend Plot



B. SpO2 Information

Max SpO2: 99 Min SpO2: 50 AVG SpO2: 91.9
 SpO2 Count: 876 SpO2 Index: 60.7

SpO2 Trend Plot



C. Body Position

Body Position and Breath Information Distribution Relationship

Body Position	Hypopnea (H)	OSA	CSA	MSA	Total
Supine	27	495	10	0	532
Left Side	0	0	0	0	0
Right Side	0	0	0	0	0
Prone	0	0	0	0	0

Body Position Trend Plot



D. Pulse Information

Max Pulse: 124 Min Pulse: 49 AVG Pulse: 74.6
 Max Pulse in Max Breath Events: 104 EFM

Pulse Trend Plot




E. Summary Information

AHI: 55.9 Score: 54.7 SpO2: 60.7 Min SpO2: 50
 OSA Count: 495 CSA Count: 10 MSA Count: 0 Hypopnea Count: 27

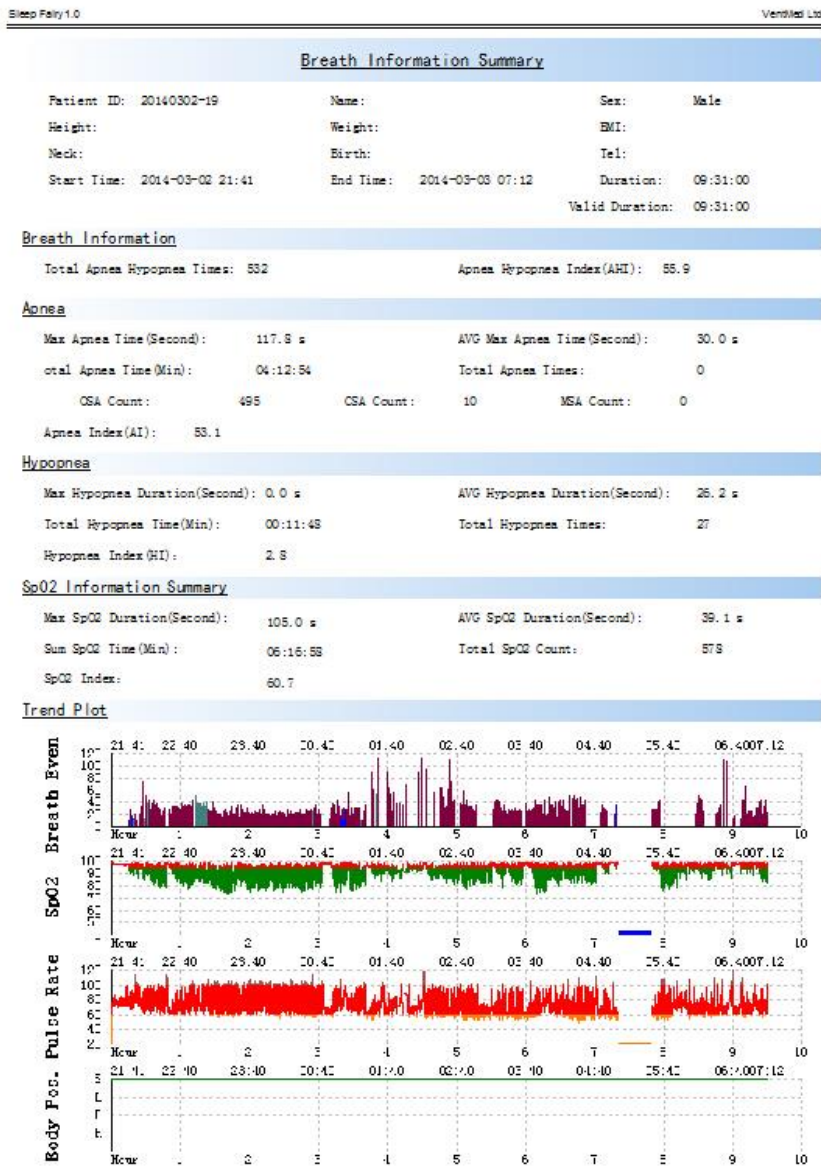
F. Doctor Evaluation


1. Sleep Apnea: Conformity Inconformity Single Scoring
 Type: OSA CSA MSA Hypopnea
 Level: Slight Moderate Serious
2. Sleep Hypoxemia: Slight Moderate Serious
3. Blood pressure after waking: Normal Raised Lower
4. Therapy: CPAP Otorhinolaryngologic Operation Stomatology Operation
 Denture/Mouth Containing Device Change Sleep Position Lose Weight
5. Suggestion:

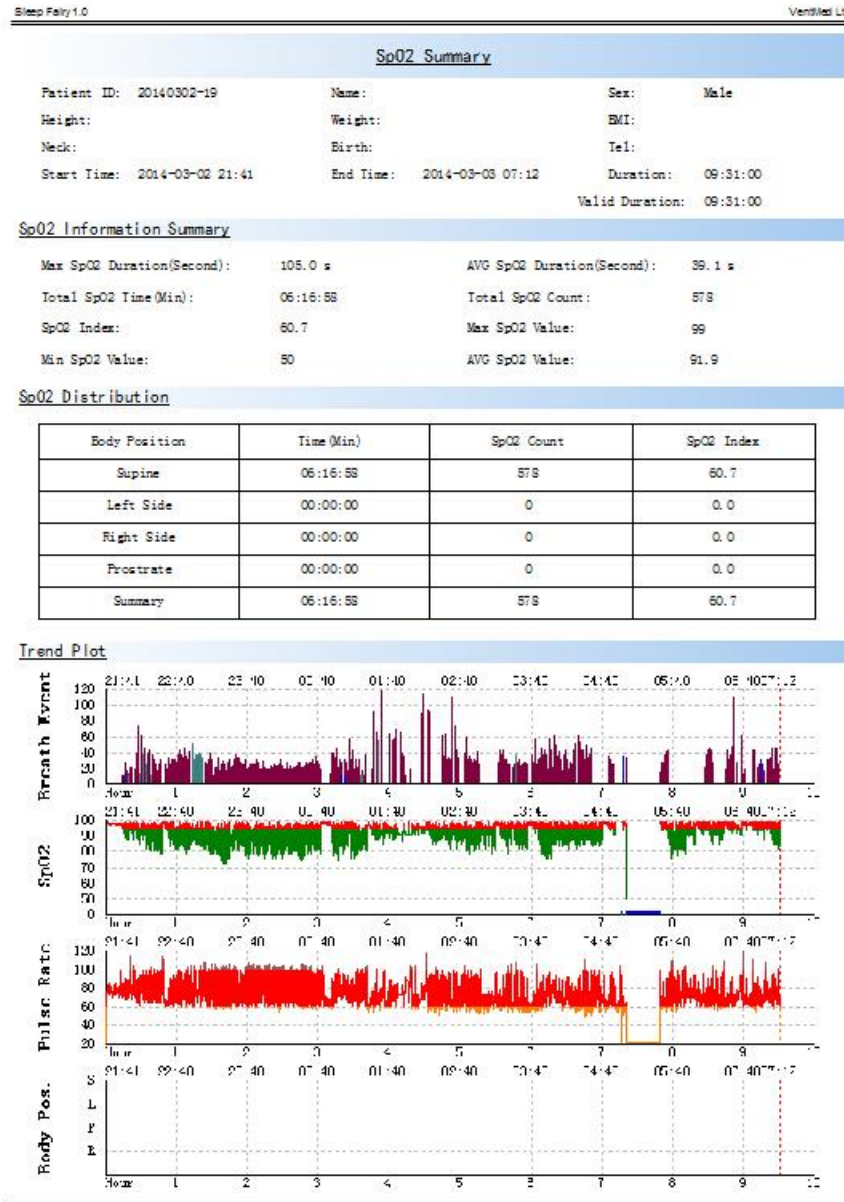
Physician's Signature:
 Date:


2) Click “Reports ” to choose “Breath Information Summary” as below capture.

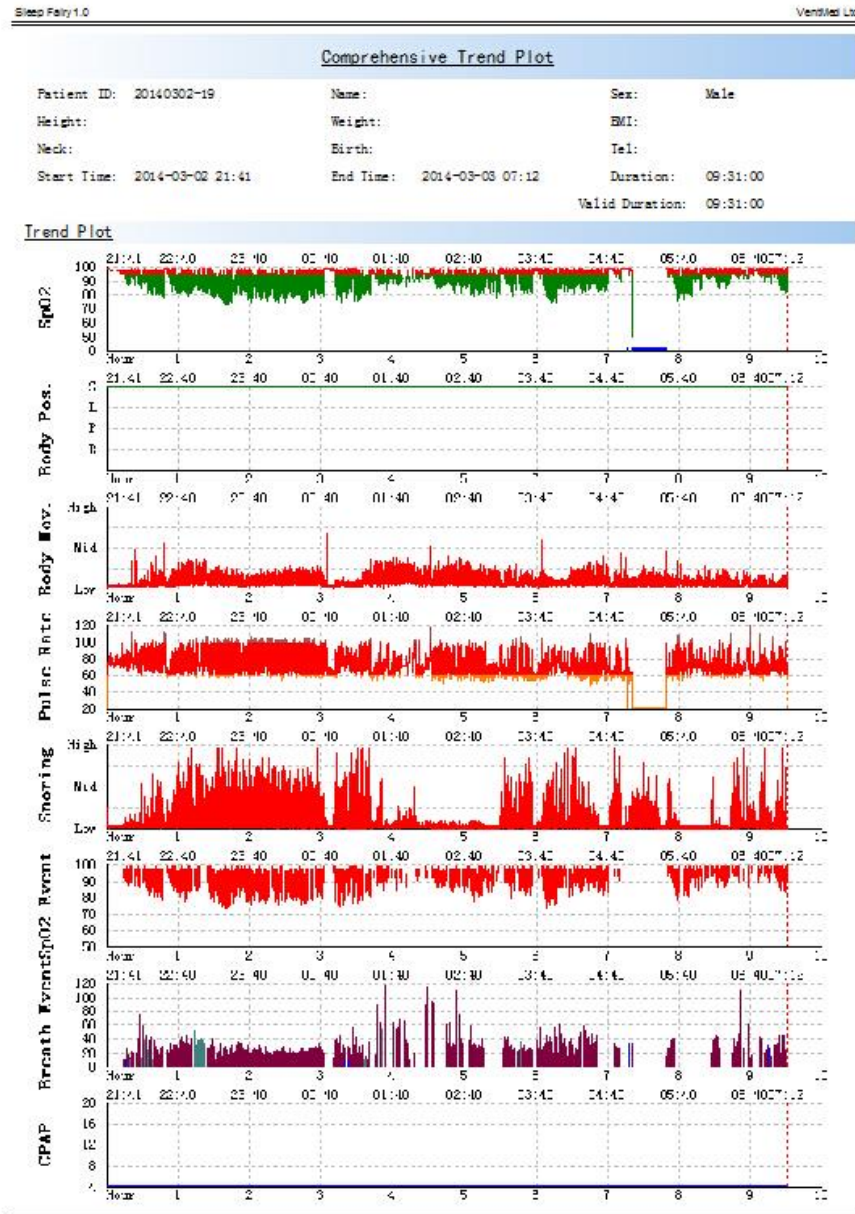
This report can display data change of breath event、SpO2、Pulse etc.



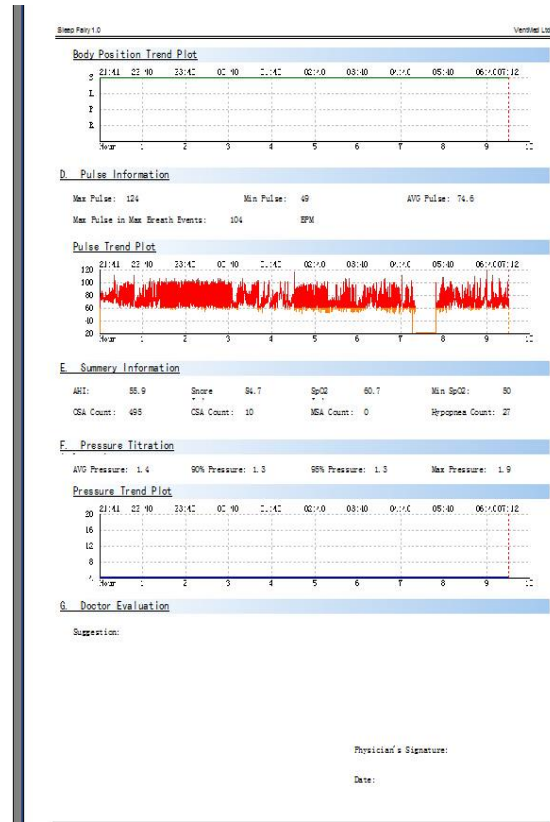
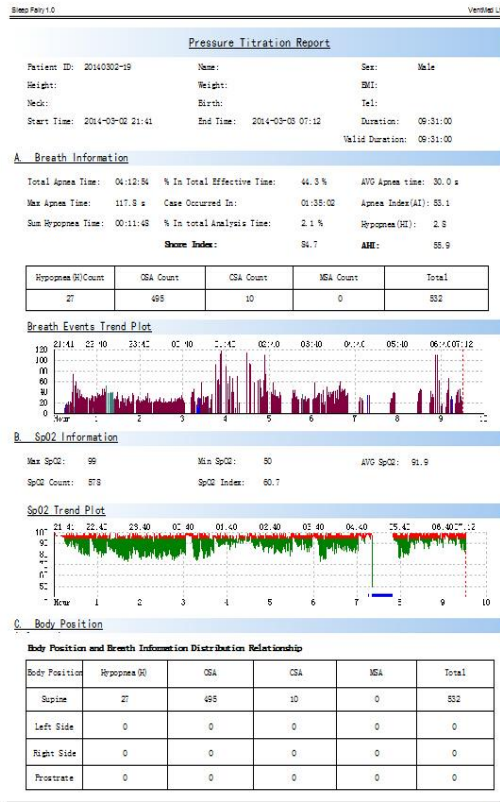
- 3) Click “Reports ” to choose “SpO2 Summary” as below capture. This plot showed the change of SpO2.



- Click “Reports ” to choose “Comprehensive Trend Plot” then can view the connection of sleep data and trend plots.

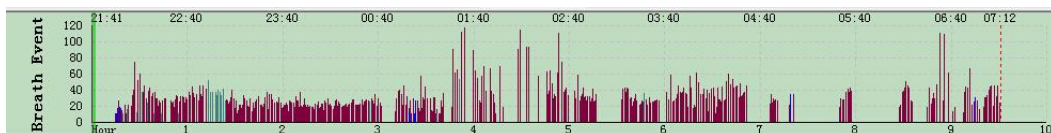


- 5) Click “Reports” to choose “Pressure Titration Report” then can view the connection between sleep data and trend plots, can proceed pressure titration when patients use respiratory device.



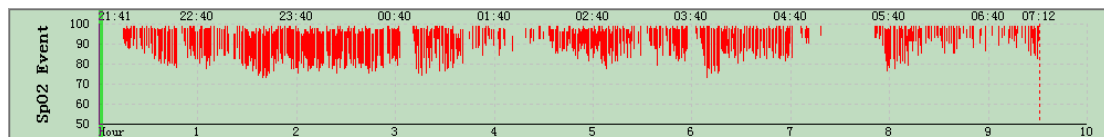
(2) Single Trend Plot

1) Breath Event Distribution Trend Plot



This trend plot displays connection between breath event length and sleep time, clearly view longest breath event duration. Vertical ruler displays apnea time(unit: second) ,horizontal ruler displays data time.

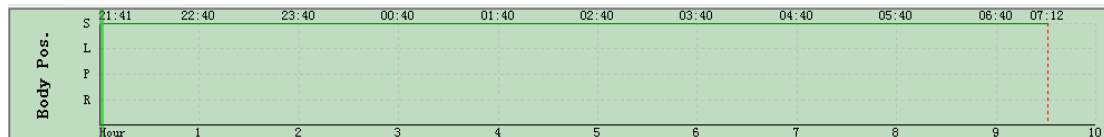
2) SpO2 Trend Plot



This trend plot display the connection between SpO2 and time.

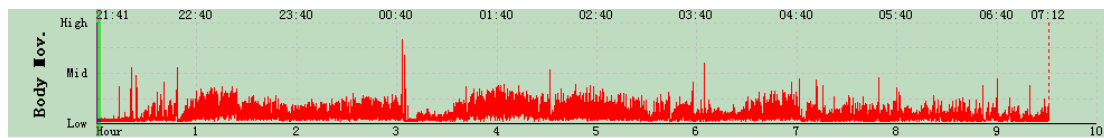
Vertical ruler displays SpO2 percentage, horizontal ruler displays data time.

3) Body Position Trend Plot



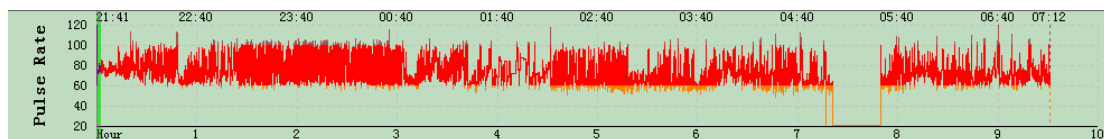
This trend plot display body position. Horizontal ruler displays time(hours),vertical ruler displays body position: 'S'= Supine, 'L'=Left, 'P'= Prostrate, 'R'=Right. To select the data, the trend plot can display in main window.

4) Body Movement Trend Plot



This trend plot displays connection between movement and sleep time, clearly show the biggest body movement duration. Vertical ruler displays body movement rang ,horizontal ruler displays data time.

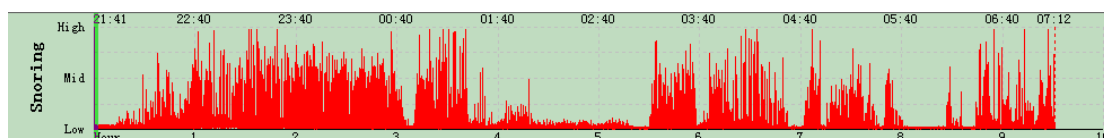
5) Pulse Rate Trend Plot



This trend plot displays connection between pulse and time.

Vertical ruler displays pulse times, horizontal ruler displays data time. Combine other trend plots can view if have apnea when rhythm of the heart is frequent fluctuation.

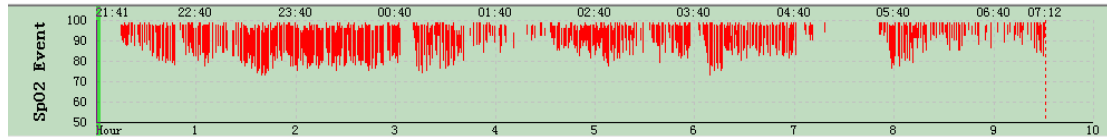
6) Snoring Trend Plot



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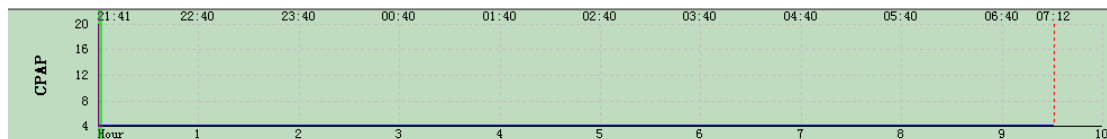
This trend plot displays connection between snoring and sleep time, clearly show snoring duration. Vertical ruler displays snoring range, horizontal ruler displays data time.

7) SpO2 Event Trend Plot



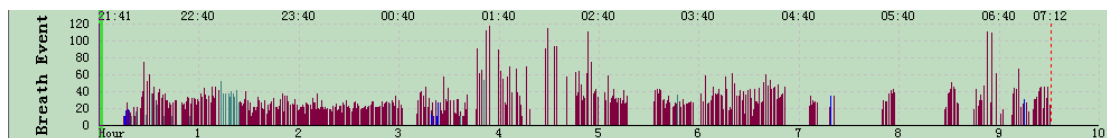
This trend plot displays connection between SpO2 and sleep time, clearly show SpO2 duration. Vertical ruler displays SpO2 value, horizontal ruler displays data time.

8) CPAP Pressure Trend Plot



This trend plot displays connection between CPAP pressure and sleep time, clearly show the biggest pressure duration. Vertical ruler displays pressure value, horizontal ruler displays data time.

9) Breath Event Summary



This trend plot displays breath event time、length、type、body position etc data, clearly show data connections and summary information.

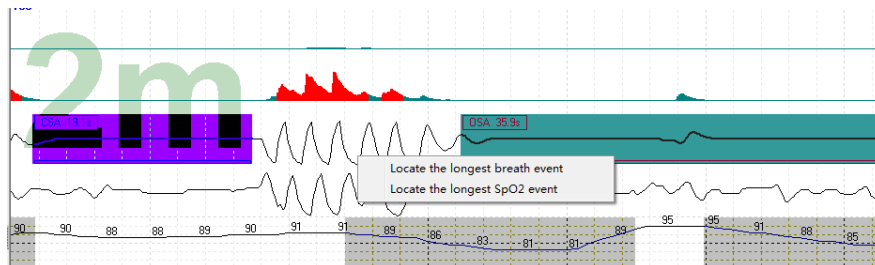
10) SpO2 Event List

Page	Channel	StartTime	Duration(s)	Type	Body Position	Max. SpO2	Min. SpO2	Max. Pulse	Min. Pulse	
29	SpO2	12.0	19.0	SpO2 Event	Supine	98	92	-	-	will be located by double click the memo*
30	SpO2	8.0	25.0	SpO2 Event	Supine	98	94	-	-	
31	SpO2	10.0	35.0	SpO2 Event	Supine	98	90	-	-	
32	SpO2	20.0	24.0	SpO2 Event	Supine	97	89	-	-	
33	SpO2	16.0	39.0	SpO2 Event	Supine	99	91	-	-	
35	SpO2	22.0	32.0	SpO2 Event	Supine	98	88	-	-	
36	SpO2	27.0	27.0	SpO2 Event	Supine	97	87	-	-	

This trend plot displays SpO2 event time、length、type、body position etc data, clearly show data connections and summary information.

Locate Event

Right click on main window, will display below capture to locate event, can directly locate the longest breath event and the longest SpO2 event.



4 Backup/Delete Records

If need delete sleep data, click “File” to choose “Backup/Delete Records to tick the sleep data needed delete and press “delete” to complete.

In order prevent delete important data accidently, please tick useful data to backup or tick “select all” to backup all data.

Set backup data storage route, ensure disk space is enough.


Data after backup will have a mark as below capture:

The screenshot shows a dialog box titled "Backup / Delete" with a "File List" tab. The table below lists patient records with checkboxes for selection.

Patient ID	Name	Birth	Record Time	Duration
<input checked="" type="checkbox"/>	20140219-9		2014/2/19	08:46:00
<input checked="" type="checkbox"/>	20140220-11		2014/2/20	08:16:30
<input checked="" type="checkbox"/>	20140226-17		2014/2/26	09:17:30
<input checked="" type="checkbox"/>	20140302-19		2014/3/2	09:31:00

5 Edit Record

View and edit patient information

Open a case, click “Record Information ”, will popup patient information window, can input name、sex、birth、age、neck、contact information etc.

Record Information

Patient Information | Data Information

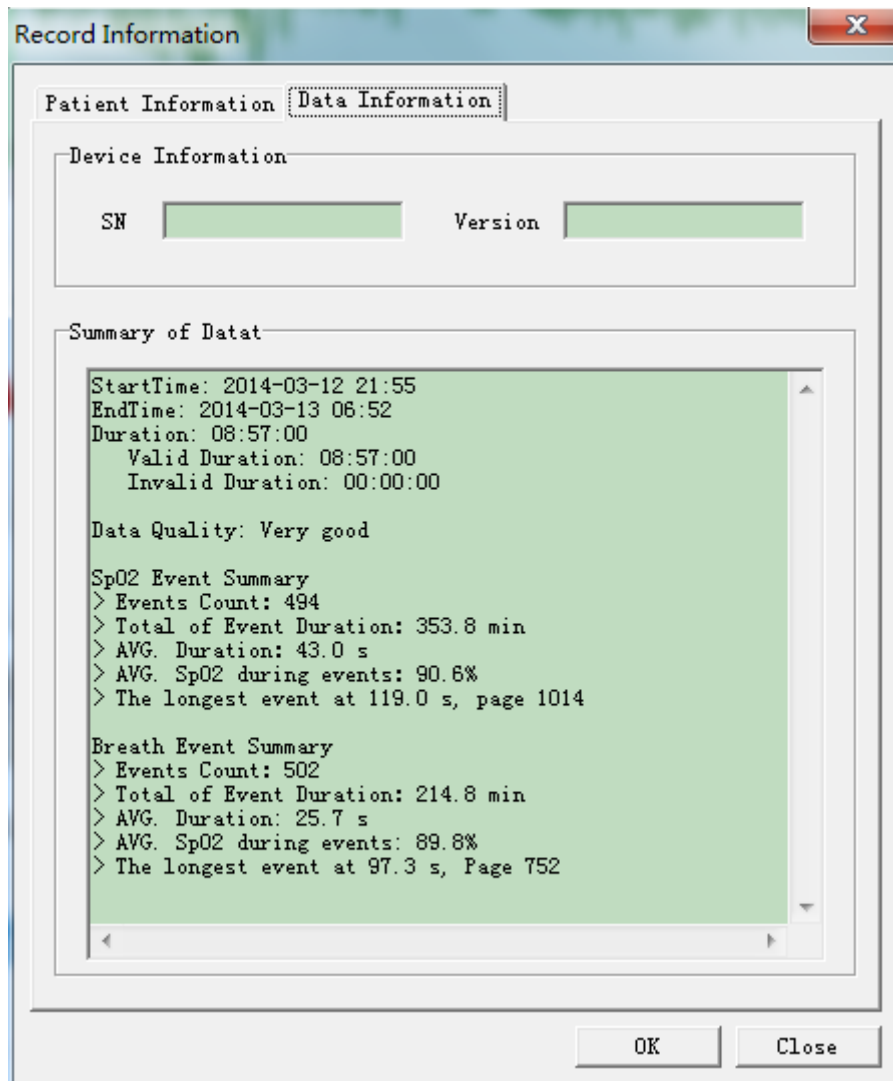
Patient ID: 20140312-6
Patient ID: YYYYMMDD-No.
StartTime: 2014-03-12 21:55
EndTime: 2014-03-13 06:52
Duration: 08:57:00

Patient Information

Name: Derek Sex: 1-Male 2-Female
Birth: 1952/ 1/ 1 Age: 0
Weight: 98.00 kg Height: 175.00 cm
BMI: 32.00 Neck: 0.00 cm
Tel.: E_mail:
Address:
Comments:

Directory
C:\Data Files\20140312-6\
OK Close

Click "Data Information" to view data summary included data duration、 valid duration、 data quality etc as long as display SpO2 and breath event summary:



Edit Event

User can edit data in view. After data is edited, rescan can exclude all edited data. Airflow、snoring and SpO2 events are workable to edit.

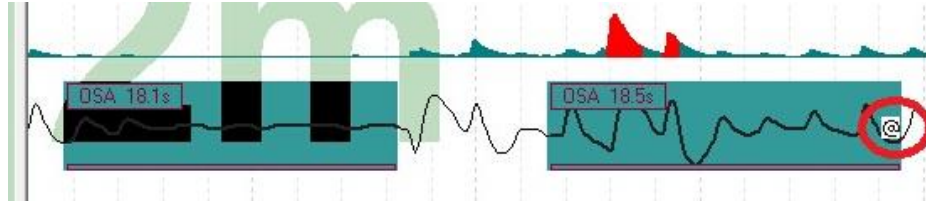
(1) Edit Airflow Event

After edit airflow event, all report will be updated when open again or show in window, all trend plot also updated immediately.

1) Draw Edit Box and Insert Breath event

Move the mouse to the starting position of event, press left mouse button and drag to the end of the event location, choose event type to finish add default event.

Once the user changed current event type, the default type will be changed correspondingly. If the airflow event is overlap, the original event will be covered. The newly added events will have "@" symbol to identify.



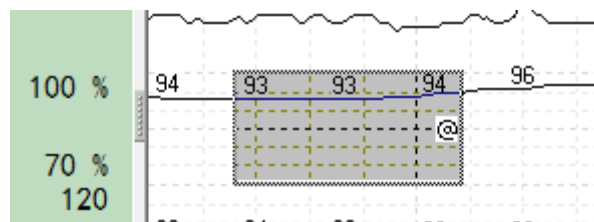
2) Edit or Delete Airflow Event

When need change event's classify or delete event already added, right click airflow event to select "delete" or select apnea type.

(2) SpO2 Event

1) Draw edit box and Insert SpO2 Event

Move the mouse to the starting position of event, press left mouse button and drag to the end of the event location to finish add event. If the airflow event is overlap, the original event will be covered. The newly added events will have "@" symbol to identify.

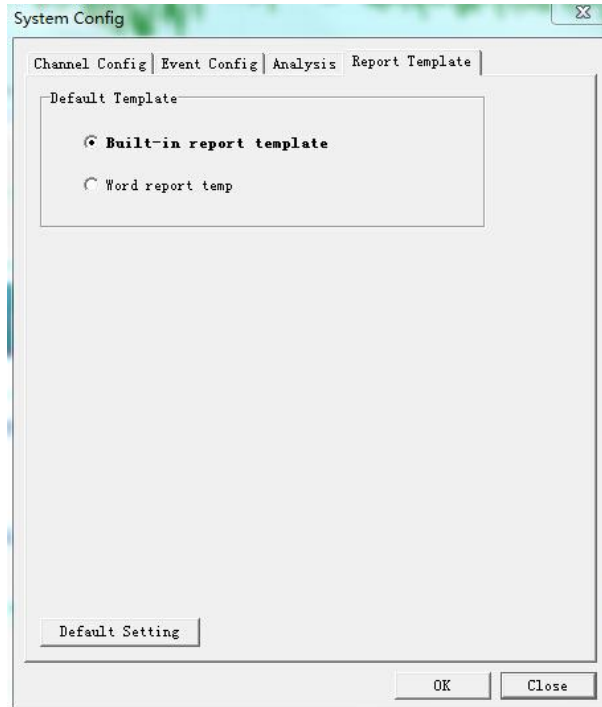


2) Delete SpO2 Event

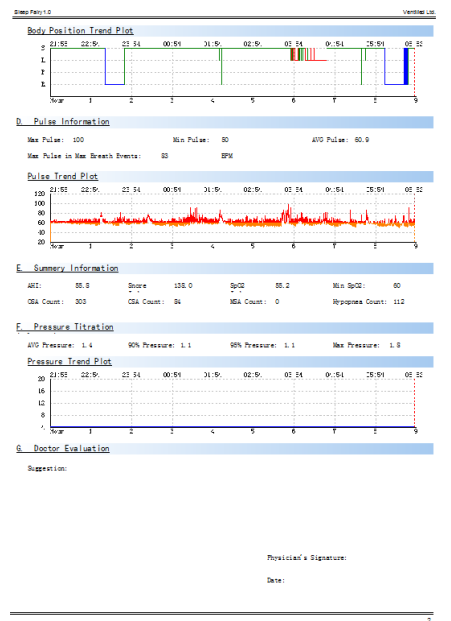
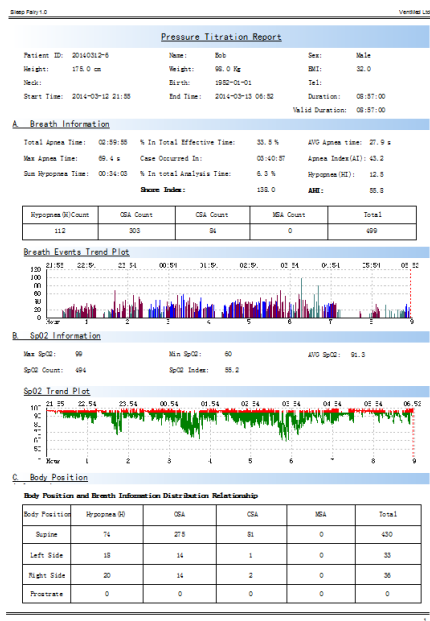
Right click SpO2 event to choose "Delete" if want to delete event.

Select Report Template

Click "Option" to choose "System Config", click "Report Template" to select default template.



(1) Build-in Report Template Report form



(2) Word Template Report Form

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Pressure Titration Report

Patient ID: 2016021-9 Name: Bob Sex: Male
 Height: 175.0 cm Weight: 68.0 kg BMI: 22.0
 Neck: Birth: 1952-03-01 Tel:
 Start Time: 2014-03-12 21:58 End Time: 2014-03-13 06:52 Duration: 08:57:00
 Valid Duration: 08:57:00

A. Breath Information

Total Apnea Time: 02:59:55 % In Total Effective Time: 33.5% AVG Apnea time: 27.9 s
 Max Apnea Time: 69.4 s Case Occurred In: 03:40:57 Apnea Index(AI): 43.2
 Sum Hypopnea Time: 00:34:03 % In total Analysis Time: 6.3% Hypopnea (HI): 12.8
 Score Index: 138.0 AHI: 55.9

Hypopnea (H) Count	OSA Count	CSA Count	MSA Count	Total
112	303	54	0	499

Breath Events Trend Plot

B. SpO2 Information

Max SpO2: 99 Min SpO2: 80 AVG SpO2: 91.3
 SpO2 Count: 494 SpO2 Index: 55.2

SpO2 Trend Plot

C. Body Position

Body Position and Breath Information Distribution Relationship

Body Position	Hypopnea (H)	OSA	CSA	MSA	Total
Supine	74	275	51	0	420
Left Side	18	14	1	0	33
Right Side	20	14	2	0	36
Prone	0	0	0	0	0

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Body Position Trend Plot

D. Pulse Information

Max Pulse: 100 Min Pulse: 50 AVG Pulse: 60.9
 Max Pulse In Max Breath Events: 83 BPM

Pulse Trend Plot

E. Summary Information

AHI: 55.9 Score: 138.0 SpO2: 85.2 Min SpO2: 80
 OSA Count: 303 CSA Count: 54 MSA Count: 0 Hypopnea Count: 112

F. Pressure Titration

AVG Pressure: 1.1 90% Pressure: 1.1 90% Pressure: 1.1 Max Pressure: 1.9

Pressure Trend Plot


G. Doctor Evaluation

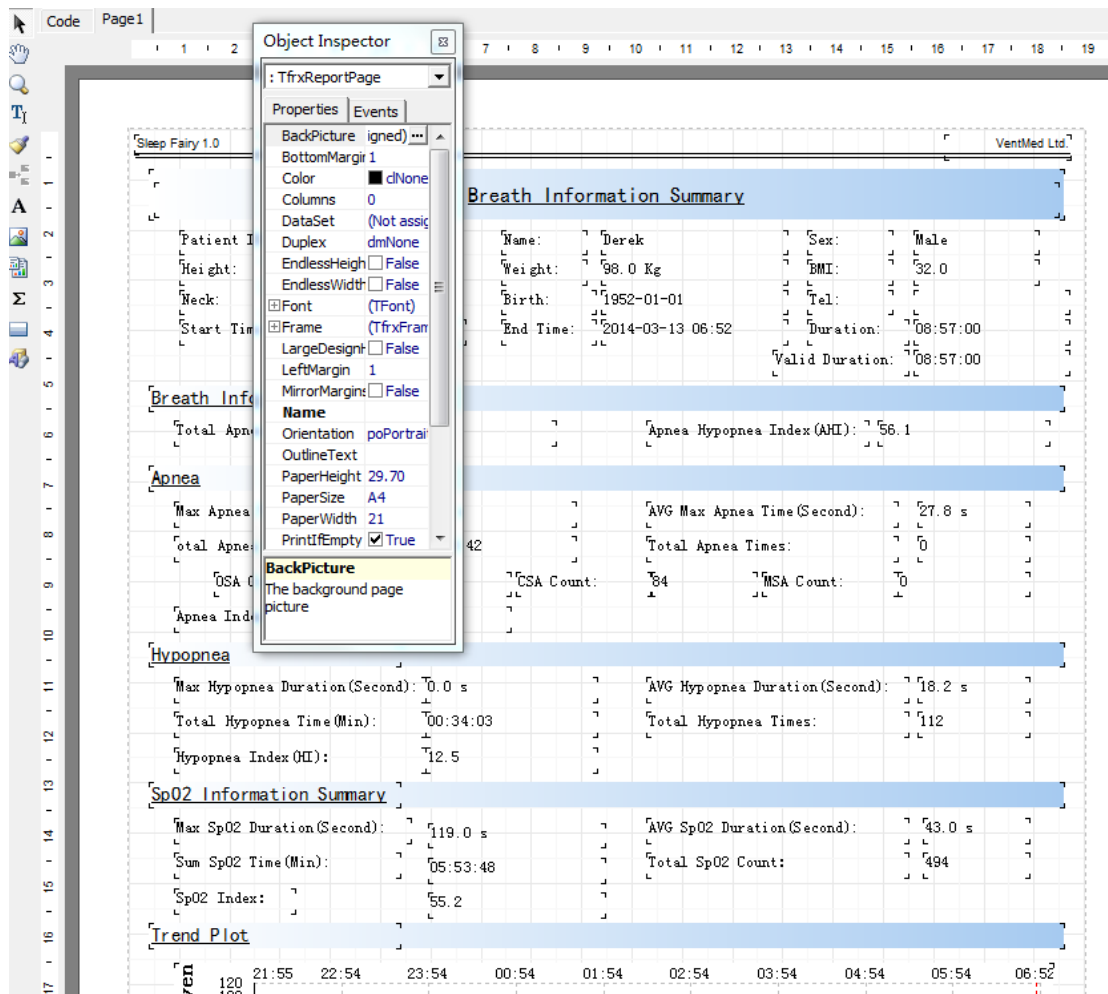
Suggestion:

Physician's Signature:
 Date:

Edit Report

(1) Edit build-in template report

Click “ Report ” to open “Breath Event Summary” , choose “Edit page  ” on the left above window to edit as below capture:



Double click the item to edit or delete. Click “OK” to save after completed edit. Sleep monitoring report、SpO2 summary and comprehensive trend plot etc are workable to edit.

Click  to export to PDF format, click “OK” to save.

(2) Edit Word template report

Click item to edit or delete. Click “OK” to save after completed edit. Sleep monitoring report、SpO2 summary and comprehensive trend plot etc are workable


to edit.

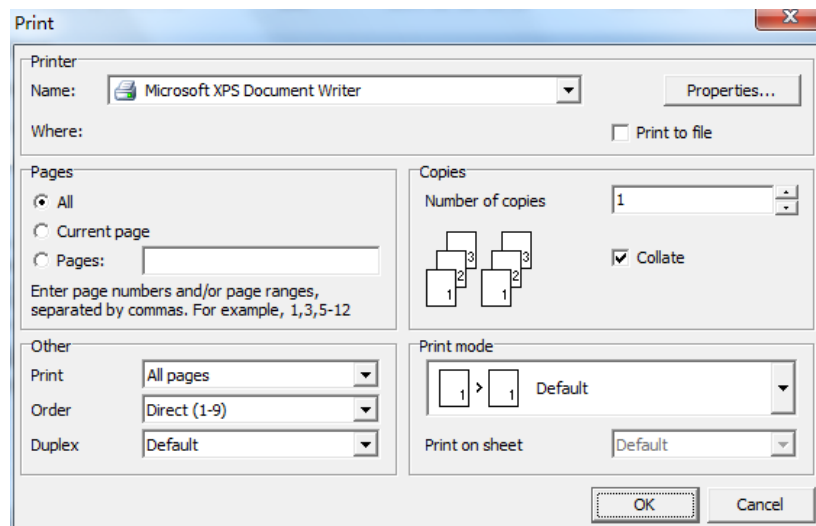
6 Print

Print current screen

Click “File” to choose “Print Current Screen” to finish print current screen.

Print Report

Click  to print build-in template report, can select print page, number of copies, printer name and other printer option as below capture:



Print Word template report, can select “Print” directly in Word document.

Common Problem and Solution

The following lists some users may encounter problems in use process, reasons and recommend solutions. If Local suppliers suggested solution cannot solve the problem, please contact physician or my company service center.

Airflow Signal.....Nasal Oxygen Tube

Description	Possible Reason Analysis	Solution
Airflow rang too small or too large	Nasal oxygen tube is too far or too near	Reset nasal oxygen position, adjust to suitable distance
No airflow	Nasal oxygen tube fall out	Reset nasal oxygen position, adjust to suitable distance
	Nasal oxygen tube damage	Replace or contact service center
	Nasal oxygen tube knot	Check and reset correctly

SpO2 Signal.....SpO2 Sensor

Description	Possible Reason Analysis	Solution
No SpO2	Do not connect with main device	Connect SpO2 sensor to main device. After power on, SpO2 sensor display red light normally.
	Incorrect SpO2 sensor placement	Adjust wear method or change to other finger.
	SpO2 sensor is extruded, finger blood circulation decline	Adjust wear method or change to other finger.
	User pulse is weak	Adjust wear method or change to other finger.
	Finger temperature is too low	Wait finger temperature recover to normal value to wear.
	Exist interference sources: such as arterial duct or blood pressure cuff	Reduce interference or remove interference sources
	SpO2 sensor red light do not shine finger	Adjust wear method or change to other

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		finger.
	SpO2 do not attach on finger	Adjust wear method or change to other finger.
	Device do not work correctly	Power off, check all is connect and restart; Contact serve center
Sporadic SpO2 signal	SpO2 is loose	Fix SpO2 sensor, can use medical tape to fix
	Finger temperature is too low	Wait finger temperature recover to normal value to wear.
	Ambient lamp is too light	Cover ambient light source
	Coated with nail polish on finger	Do not use on the finger with nail polish
	User motions too much or motion amplitude is too large	Reduce or stop motion