Dear Users,

Thank you very much for purchasing our product. The Manual descript in accordance with the Pulse Oximeter's features and requirements, main structure, functions, specifications, correct methods for transportation, installation, usage, operation, repair, maintenance and storage, etc. as well as the safety procedures to protect both the user and equipment. Refer to the respective chapters for details.

Please read the Manual very carefully before using this equipment. These instructions describe the operating procedures to be followed strictly; failure to follow these instructions can cause measuring abnormality, equipment damage and personal injury. The manufacturer is NOT responsible for the safety, reliability and performance issues and any monitoring abnormality, personal injury and equipment damage due to user's negligence of the operating instructions. The manufacturer's warranty service does not cover such faults. (Owing to forthcoming revision(s)), the specific products you received may not be totally in accordance with the description of this User Manual. We would sincerely regret for that.

This product is a pulse oximeter and can be used repeatedly. Its useful life is 3 years.

**WARRANTY:**

- An uncomfortable or painful feeling may appear if using the device ceaselessly, especially for microcirculation barrier users. It is recommended that the sensor should not be applied to the same finger for over 2 hours.
- For individual users, there should be a more prudent inspecting in the placing process. The device can not be clipped on the edema and tender tissue.
- The light (the infrared is invisible) emitted from the device is harmful to the eyes, so the user and/or the maintenance persons, can not stare at the light.
- Testee can not use enameled or other makeup.
- Testee’s fingernail cannot be too long.
- The product will automatically be powered off when no signal is in the product within 5 seconds.
- Do not use the device on infant or neonatal users.
- Do not use the device in healthy people to monitor their pulse and blood oxygen levels for sports and/or aviation only. Finger should not be moving, it should be stationary while using the oximeter, otherwise it will cause inaccurate results. It is suitable for users between 15 to 60 years old. Do not use it for continuous monitoring.
- The SpO2 error is ±4%, pulse rate error is ±2 bpm or ±2% (select larger).

**Usage:**

1.3 Attentions
- Warnings

The device may not work for all users. If you are unable to achieve stable readings, discontinue use.
- Necessary maintenance must be performed by qualified service engineers ONLY. Users are not permitted to maintain it by themselves.
- The oximeter cannot be used together with devices not specified in the User's Manual. Only accessories that are provided or recommended by the manufacturer can be used with this device.
- This product is calibrated before leaving the factory. The instrument does not have a low-voltage alarm function, it only shows the low-voltage; please change the battery when the battery energy is used up.
- The oximeter is calibrated before leaving the factory. The oximeter cannot be used together with devices not specified in the User's Manual. Only accessories that are provided or recommended by the manufacturer can be used with this device.

2.1 Classification
- Class I, (MDD93/42/EEC IX Rule 10)

2.2 Features
- Operation of the product is simple and convenient.
- The product is small in volume, light in weight (total weight is about 50g including batteries) and convenient in carrying.
- Power consumption of the product is low, and the two originally equipped AAA batteries can be operated continuously for 20 hours.
- The product will automatically be powered off when no signal is in the product within 5 seconds.

2.3 Major Applications and Scope of Application
- This device is intended for non-medical use in healthy people to monitor their pulse and blood oxygen levels for sports and/or aviation only. Finger should not be moving, it should be stationary while using the oximeter, otherwise it will cause inaccurate results. It is suitable for users between 15 to 60 years old. Do not use it for continuous monitoring.

2.4 Environment Requirements
- Medium: 
  - a) Temperature:−40°C~+60°C
  - b) Relative humidity ≤95%
  - c) Atmospheric pressure:500hPa~1060hPa
- Storage Environment:
  - a) Temperature:−10°C~+40°C
  - b) Relative Humidity ≤50%
  - c) Atmospheric pressure:700hPa~1060hPa

3 Principle and Caution

3.1 Principle of Measurement
- Principle of the Oximeter is as follows: An experience formula of data process is established taking use of Lambert Beer Law according to Spectrum Absorption Characteristics of Reductive Hemoglobin (Hb) and Oxymyoglobin (HbO2) in glow & near-infrared zones. Operation principle of the instrument is: Photodetector Oxymyoglobin Inspection Technology is adopted in accordance with Capacity Pulse Scanning & Recording Technology, so that two beams of different wavelengths of lights can be focused onto a human nail tip through perspective clamp finger-type sensor. A measured signal can then be obtained by a photosensitive element, information acquired through which will be shown on screen through treatment in electronic circuits and microprocessor.

3.2 Caution
- 1. The finger should be placed properly (see the attached illustration of this manual Figure 5), or else it may cause inaccurate measurement.
- 2. The SpO2 sensor and photoelectric receiving tube should be arranged in a way with the subject’s artery in a position where between.
- 3. Make sure the optical path is free from any optical obstacles like rubberized fabric.
- 4. Excessive ambient light may affect the measuring result. It includes fluorescent lamp, dual ruby light, infrared heater, direct sunlight, etc.
- 5. Strenuous action of the subject or extreme electrosurgical interference may also affect the accuracy.
- 6. Testee cannot use enameled or other makeup.
- 7. Due to the sensitivity of the pulse oximeter, you should keep your finger stationary during measurement. It is recommended that you use this instrument for measurement before or after sports. Do not use for continuous monitoring.

4 Technical Specifications

4.1 Display Format: OLED Display;

4.2 Power Requirements: 2 × 1.5V AAA alkaline battery (or using rechargeable battery instead), adaptable range: 2.4V~3.6V

4.3 Power Consumption: Smaller than 30mA.

4.4 Resolution: 1% for SpO2, and 1 bpm for Pulse Rate.

4.5 Measurement Accuracy: ±2% in stage of 70%-100% SpO2, and meaningless when stage being smaller 70%; ±2% or ±2% (select larger) for Pulse Rate

4.6 Measurement Performance in Weak Filling Condition: SpO2 and pulse rate can be shown correctly when pulse-filling ratio is 0.4%. SpO2 error is ±4%, pulse rate error is ±2 bpm or ±2% (select larger).

4.7 Resistance to surrounding light: The deviation between the value measured in the condition of man-made light or indoor natural light and that of darkness is less than ±15%.

4.8 It is equipped with a function switch. The Oximeter can be powered off in case no finger is in the Oximeter within 5 seconds.

4.9 Optical Sensor
- Red light (wavelength is 660nm, 6.65mW)
- Infrared wavelength is 880nm, 8.75mW)

5 Accessories
- One hanging rope and carrying case
- Two batteries (optional);
6.1 View of the Front Panel

6.2 Battery
Step 1. Refer to Figure 3. and insert the two AAA size batteries properly in the right direction.
Step 2. PLEASE LOOK AT + / - SIGN BEFORE INSTALLING THE BATTERY
Step 3. Replace cover by sliding battery cover back on in line with inside tab.

Please take care when you insert the batteries as the improper insertion may damage the device.

6.3 Mounting the Hanging Rope
Step 1. Put the end of the rope through the hole.
Step 2. Put another end of the rope through the first one and then tighten it.

Please take note that we have used a new battery placement design, we will use the new placement instruction replace this paragraph.

5 Operating Guide
1) Insert the two batteries properly to the direction, and then replace the cover.
2) Open the clip as shown in Figure 5.
3) Let the user’s finger go into the rubber cushions of the clip (make sure the finger is in the right position), and then clip the finger.
4) Press the switch button once on front panel.
5) Do not shake the finger and keep the user at ease during the process. Meanwhile, human body is not recommended to be in movement status.
6) Get the information directly from screen display.
7) The button has three functions. When the device is powered off, pressing the button will turn it on; when the device is powered on, pressing the button shortly can change direction of the screen; when the device is powered on, pressing the button long can change brightness of the screen.

Fingernails and the luminescent tube should be on the same side.

9 Troubleshooting

<table>
<thead>
<tr>
<th>Trouble</th>
<th>Possible Reason</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>The SpO2 and Pulse Rate are not displayed stably</td>
<td>1. The SpO2 is too low to be detected.</td>
<td>1. Place the finger properly and try again.</td>
</tr>
<tr>
<td>The device is powered on, pressing the button long can change brightness of the screen.</td>
<td>1. The SpO2 is not properly positioned. 2. The user’s SpO2 is too low to be detected.</td>
<td>1. Please place the finger properly and try again.</td>
</tr>
<tr>
<td>The device is powered off automatically when it gets no signal within 5 seconds.</td>
<td>1. The SpO2 is not placed inside deep enough. 2. The finger is shaking or the user is moving.</td>
<td>1. Please place the finger properly and try again. 2. Let the user keep calm</td>
</tr>
<tr>
<td>The display is off suddenly</td>
<td>1. The batteries are drained or almost drained. 2. The batteries are not inserted properly. 3. The malfunction of the device.</td>
<td>1. Change batteries. 2. Reinstall batteries. 3. Please contact the local service center.</td>
</tr>
</tbody>
</table>

10 Key of Symbols

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>✔️</td>
<td>Type BF</td>
</tr>
<tr>
<td>🚨</td>
<td>Warning – See User Manual</td>
</tr>
<tr>
<td>ℓ</td>
<td>The pulse oxygen saturation (%)</td>
</tr>
<tr>
<td>ℓ</td>
<td>Pulse rate (bpm)</td>
</tr>
<tr>
<td>ℓ</td>
<td>The battery voltage indication is deficient (change the battery in time avoiding the inexact measure)</td>
</tr>
<tr>
<td>ℓ</td>
<td>1. No finger inserted 2. An indicator of signal inadequacy</td>
</tr>
<tr>
<td>ℓ</td>
<td>Battery positive electrode</td>
</tr>
<tr>
<td>ℓ</td>
<td>Battery cathode</td>
</tr>
<tr>
<td>SN</td>
<td>Serial number</td>
</tr>
<tr>
<td>Å</td>
<td>Alarm inhibit</td>
</tr>
<tr>
<td>Å</td>
<td>WEEE (2002/96/EC)</td>
</tr>
<tr>
<td>Å</td>
<td>International Protection</td>
</tr>
</tbody>
</table>

11 Function Specification

<table>
<thead>
<tr>
<th>Display Information</th>
<th>Display Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Pulse Oxygen Saturation (SpO2)</td>
<td>OLED</td>
</tr>
<tr>
<td>Pulse Rate (PR)</td>
<td>OLED</td>
</tr>
<tr>
<td>Pulse Intensity (bar-graph)</td>
<td>OLED bar-graph display</td>
</tr>
<tr>
<td>Pulse wave</td>
<td>OLED</td>
</tr>
<tr>
<td>SpO2 Parameter Specification</td>
<td></td>
</tr>
<tr>
<td>Measuring range</td>
<td>95%~100%, (the resolution is 1%)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±2%</td>
</tr>
<tr>
<td>Optical Sensor</td>
<td>Red light (wavelength is 660nm) Infrared (wavelength is 880nm)</td>
</tr>
<tr>
<td>Pulse Parameter Specification</td>
<td></td>
</tr>
<tr>
<td>Measuring range</td>
<td>30bpm~250bpm (the resolution is 1 bpm)</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±2bpm or±2% select larger</td>
</tr>
<tr>
<td>Pulse wave</td>
<td>OLED</td>
</tr>
</tbody>
</table>

Battery Requirement
1.5V (AAA size) alkaline batteries + 2 or rechargeable battery

Battery Useful Life
Two batteries can work continually for 20 hours

Dimensions and Weight
Dimensions: 57(L) × 31(W) × 32(H) mm
Weight: About 50g (with the batteries)