FL400 Pulse Oximeter
User Manual
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www.Facelake.com
webmaster@facelake.com

Instructions to User

Dear Users, thank you very much for purchasing our product. The Manual written for the current Pulse Oximeter. In case of modications and software upgrades, the information contained in this document is subject to change without notice. The Manual describes, in accordance with the Pulse Oximeter's features and requirements, main structure, functions, specications, correct method for transportation, installation, usage, operation, repair, maintenance and storage, as well as the safety precautions to protect both the user and equipment. Refer to the subsequent chapters for details. Please read the Manual very carefully before using this equipment. These instructions describe the operating procedures to be followed strictly, to fail to follow these instructions can cause malfunction, 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 failures. Owing to the aforementioned renements, the specic products you received may not be totally in accordance with the description of this User Manual. We would sincerely regret any inconvenience caused.

1. Instructions for Safe Operations

1.1. Instructions for Safe Operations

➢ The oximeter is made from Non- toxic materials.
➢ DO NOT use the oximeter while the testee is being measured by MRI and/or CT.
➢ The disposal of scrap instruments and their accessories and packings (including batteries) should also be performed at the appointed agent or just contact us for calibration.
➢ DO NOT use the oximeter on patients or almost drained.
➢ Do not use the device on infants and adults.
➢ The device is suitable for children above four years old and adults (Weight should be between 15kg/33lb to 110kg/242lb).

1.2. Principle and Caution

The 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 Red and Infrared lights. The product is not equipped or recommended by the manufacturer can be used with this device.

➢ The oximeter is not a medical device because of a medical condition should not use the FL400 and should consult with their physicians.
➢ DO NOT use the oximeter in an environment with inflammable materials, high temperature and moisture.

2. Classification:

a) General usage
b) Relative usage

2.1. General Usage

➢ The oximeter is made from Non-toxic materials.
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2.2. Relative Usage

➢ The oximeter is made from Non-toxic materials.
➢ 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 failures.

3. Warning

➢ The oximeter gats wet, please stop operating it.
➢ When it is carved from a cold environment to a warm or humid environment, please do not use it immediately.
➢ DO NOT operate buttons on the front panel with sharp materials.
➢ High temperature or high pressure steam disinfection of the oximeter is not permitted.
➢ Refer to User Manual in the relative chapter for instructions of cleaning and disinfection.

4. Instructions to User

➢ The device may not work for all users. If you are unable to achieve stable readings, discontinue use.
➢ The update period of data is less than 5 seconds, which will vary according to different individual pulse rate.
➢ Some abnormal conditions appear on the screen during the test process, pull out the finger and remove to resume normal use.
➢ The device has normal useful life for of three years since the rst elcrted use.
➢ The instrument does not have an alarm function. Do not use the device in situations where alarms are required.
➢ The SpO2 and pulse rate can be shown correctly when pulse-itting ratio is 6% 8% error ±2% error ±2% or ±2% (select larger) for Pulse Rate.
➢ The update period of data is less than 5 seconds, which will vary according to different individual pulse rate.

5. Instrument Maintenance

➢ The device has normal useful life for of three years since the rst elcrted use.
➢ The instrument does not have an alarm function. Do not use the device in situations where alarms are required.
➢ Batteries must be removed if the device is to be stored for more than one month, or else batteries may leak.
➢ A ncient circuit connects the two parts of the device. Do not twist or pull on the connection.

6. Installation of the Front Panel

➢ The instrument is packaged at the start of the shipping and is for the user and the maintenance personnel, not to stare at the light.
➢ The manufacturers dedicated to be removed. Chapter main content.

7. Repairing and Maintenance

➢ June, the oxygen saturation is the percentage of HbO2 in the total Hb in the blood, so the concentration in the blood. It is an important bio-parameter for the oxygen.
➢ For the purpose of maintaining the SpO2 more accurately and easily, our company developed the FL400. At the same time, the device can measure the pulse rate.

8. Batteries Installation

➢ The SpO2 and Pulse Rate can be shown correctly when pulse-itting ratio is 6% 8% error ±2% error ±2% or ±2% (select larger) for Pulse Rate.
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9. Estabishing of Trouble and Possible Reason

➢ Please change the batteries when the low voltage is displayed on the oximeter.
➢ Please clean the surface of the oximeter before using. Wipe the device with medical alcohol, do not allow it to dry in air, cover by dry tissue.
➢ Please take out the batteries if the oximeter is not in use for a long time. The best storage environment of the device is 40°C to 60°C ambient temperature and not higher than 90% relative humidity.
➢ Users are advised to calibrate the device immediately. It also can be performed by the state-appointed agent or just contact us for calibration.

➢ The battery may be removed when the device is not in the state.

10. Accessories

➢ The battery may be removed when the device is not in the state.

11. Maintenance

➢ The SpO2, and Pulse Rate can be shown correctly when pulse-itting ratio is 6% 8% error ±2% error ±2% or ±2% (select larger) for Pulse Rate.

12. Repairing and Maintenance

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17. Repairing and Maintenance

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31. Accessories

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32. Maintenance
### Display Information

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔄</td>
<td>Display Mode</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Display Mode</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Pulse Oxygen Saturation (SpO₂)</td>
<td>Digital</td>
</tr>
<tr>
<td>Pulse Rate (BPM)</td>
<td>Digital</td>
</tr>
<tr>
<td>Pulse Intensity (bar graph)</td>
<td>Digital bar-graph display</td>
</tr>
</tbody>
</table>

### SpO₂ Parameter Specification

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔄</td>
<td>Measuring range</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Measuring Range</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0% ~ 100% (the resolution is 1%)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>70% ~ 100%: ±2%, Below 70% unspecified</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Optical Sensor</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red light (wavelength is 660nm)</td>
<td></td>
</tr>
<tr>
<td>Infrared (wavelength is 880nm)</td>
<td></td>
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</tbody>
</table>

### Pulse Parameter Specification

<table>
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<table>
<thead>
<tr>
<th>Measuring Range</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>30bpm ~ 250bpm (the resolution is 1 bpm)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Accuracy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>±2bpm or ±2% select larger</td>
<td></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 24 hours.

### Dimensions and Weight

<table>
<thead>
<tr>
<th>Description</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>57(L) × 31(W) × 32(H) mm</td>
</tr>
<tr>
<td>Weight</td>
<td>About 50g (with the batteries)</td>
</tr>
</tbody>
</table>

### Instruction Manual/Booklet

Refer to instruction manual/booklet.

### Finger (ftpm)

1. No finger inserted
2. An indicator of signal inadequacy

### Battery positive electrode

### Battery negative electrode

### Power switch

### Serial number

### Alarm inhibit

### WEEE (2002/96/EC)

### IP22

Ingress of liquids rank

### Manufacturer

### Manufacture Date

### Storage and Transport Temperature limitation

### Storage and Transport Humidity limitation

### Storage and Transport Atmospheric pressure limitation

### This side UP

### Fragile, handle with care

### Keep dry

### Recyclable