

# AILE

## Fingertip Pulse Oximeter

### User Manual



Thank you for purchasing the pulse oximeter. Please read this user manual thoroughly before using the device. Please keep for future reference.

#### Product Features

The product is easy to use, small in volume, light in weight, convenient in carrying. It has strong anti-ambient light interference, and uses low consumption design. The low power indicator is on the front panel. It should be used for spot monitoring only and not for continuous monitoring. It is ideal for use in the home, oxygen bar, sports centre, mountain climbing, piloting airplanes, etc.

#### Intended Use

The fingertip pulse oximeter is intended to measure the pulse oxygen saturation of arterial hemoglobin and pulse rate. This device is not a medical device and is not intended to diagnose and/or treat any medical condition or disease. This device is for Sports and Aviation use only and not for medical use.

#### Specifications

Display Type Color TFT display or LED display

SpO2 Measurement range: 36% ~ 99%  
Resolution : 1%  
Accuracy : ±2% (70% ~ 99%), <70% no definition

Pulse Rate Measurement range : 30bpm ~ 250bpm  
Resolution : 1bpm  
Accuracy : The greater of ±1% and 1bpm.

Low perfusion error  
SpO<sub>2</sub> and pulse rate can be shown correctly when pulse-filling ratio is 0.2%.

Anti-ambient light interference ability  
The deviation between the SpO<sub>2</sub> measured in the room with day lighting or illumination source and that measured in the darkroom is less than ±1%.

Power supply 2 ×1.5V AAA alkaline batteries  
Working current 20mA ~ 130mA

Safety type Internal power supply, Type BF applied part

Direction sensor Four – way display ( optional )

Light sensor Red light ( wavelength 662nm ~ 666nm 7mW )  
Infrared light ( wavelength 890nm~900nm 5.5mW)

Data update cycle No more than 12s

#### Operation Instruction

1. Press the power button on front panel to turn the Pulse Oximeter on.
2. Place one of your fingers into the rubber.
3. Read the data from the display screen after a stable waveform displaying on the screen (about 8~10s).The bar graph height indicates the pulse strength.
4. Manually operation: When turning on the pulse oximeter, each time you press the power switch, and the pulse oximeter will switch to another display mode.
5. The device will power off automatically in 20 seconds when the finger is removed.

⚠ The finger measured has no lesion.

⚠ The fingernail must be upward, when place it into the rubber.

⚠ Use the Oximeter to analyze blood samples to patient condition, when the patient is anoxic.

⚠ This Pulse Oximeter is neither suitable for continuous monitoring nor suitable for measuring neonate and infant.

⚠ The results may be wrong if you do not insert the finger thoroughly in the Oximeter.

⚠ Please use the alcohol to clean the finger and the Oximeter rubber. (The Oximeter rubber is medical silicon, which has no toxin, no harm to human skin).

⚠ Do not use the device in the presence of flammable anesthetic.

⚠ If the accuracy of the measurement by the device is uncertain, check the patient's vital signs by alternative means first. Then check the Oximeter. Inaccurate measurement may be caused by the following factors:

- ① Ambient light radiation
- ② Body movement
- ③ Diagnosis test
- ④ Low perfusion
- ⑤ Effects of electromagnetic fields, such as using the cell phone nearby
- ⑥ Electrical equipment
- ⑦ The fingernail polish
- ⑧ Artery blood is too low to measure, which is caused by shock, anemia, low-temperature or vasoconstrictor.
- ⑨ Heavy smoking patient may appear momentary high CO, causing the increase of the hemoglobin CO.
- ⑩ Patients with severe jaundice will have high bilirubin, which metabolizes CO that produces significant carboxyhemoglobin, causing the high SpO<sub>2</sub>.

#### Product Accessories

- Lanyard
- User manual

#### Battery Installation

Please replace the batteries when low power indicator appears.

Install two AAA batteries into the battery compartment correctly to match the positive and negative polarities, and slide the battery cover.

⚠ Caution: Battery polarities must be installed correctly, otherwise damage might be caused to the device.

⚠ Please remove the batteries from the battery compartment if the Pulse Oximeter will not be used for a long period of time.

⚠ Follow local governing ordinance and recycling instructions regarding disposal of batteries, other electronic devices and outer packing.

#### Using the Lanyard

Put the thinner end of the lanyard through the loop which is used for lanyard. Put the thicker end of the lanyard through the thinner end of it, and then pull it tightly.

#### Maintenance

⚠ Clean the surface of the Pulse Oximeter before it is used.

⚠ Cleaning/Disinfecting the surface of the Fingertip Pulse Oximeter :Clean the surface of the device with a clean moist cloth, and disinfect the surface of the device with medical alcohol.

⚠ Do not use the caustic or abrasive detergent.

Disinfecting: Damage may be caused by disinfecting. It is recommended that the device should be disinfected when doctors suggest. The device should be cleaned before disinfecting.

Maintenance: It might be damaged, if the device does not work for a long time or is stored in a humid environment. Additional consideration for the maintenance, please follow the hospital maintenance plan.

⚠ It is recommended to keep the device in a dry environment. Humid environment may affect the product lifetime and cause damage.

⚠ Do not pour and spray liquids onto the Fingertip Pulse Oximeter, accessories, connectors, and switch.

⚠ The use life of the device is five years. Please stop using the product and follow local governing ordinance and recycling instructions regarding disposal waste, when the following situations occur:

The device cannot show normally or do not display at all.

The device cannot be powered on (New batteries have been changed.)

The sensor of the Oximeter was damaged seriously and causes the Oximeter stop working properly.

#### Dimension & Weight

Length: 60mm  
Width : 37mm  
Height : 35mm  
Weight : 29g (excluding batteries)

#### Environment Requirements

Temperature: 5-40°C  
Humidity: ≤ 80%  
Atmospheric pressure: 86-106 kPa

#### Storage, transportation condition

Operation temperature: (-20~55) °C

Environment humidity : ≤93% ( no condensation )

Atmosphere pressure : ( 50~106 ) kPa

#### Troubleshooting

Problems	Possible Causes	Solution
SpO <sub>2</sub> or pulse rate is not shown normally.	Plug the finger incorrectly	Retry to plug the finger
SpO <sub>2</sub> or pulse rate is erratic	① Finger might not be in the correct position ② Finger trembling or patient motion	① Retry to plug the finger ② remain still
The Oximeter can not be powered on	① Batteries are too low or not installed ③ Batteries are incorrectly installed ④ Damaged Oximeter	① Replace the batteries ② Ensure the batteries are installed correctly ③ Contact service representative
The screen suddenly shuts down	① The Oximeter is powered off automatically when no signal of the finger is detected for a long time ② The batteries are exhausted	① Normal ② Replace the new batteries

#### Symbol Definitions

Symbol	Definitions
	Type BF Equipment
	Attention! Consult accompanying documents
SpO <sub>2</sub> %	Oxygen saturation
PR BPM	Pulse rate
	Symbol for disposed waste electrical and electronic equipment Follow local governing ordinance and recycling instructions regarding disposal of batteries

## AFTER-SALES SERVICE

We hope you never have the need, but if you do our service is friendly and hassle-free

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