

# Instruction Manual

## Standard Finger Pulse Oximeter

### RES5100

### General Description

Thank you for purchasing RES5100 Advanced Finger Pulse Oximeter. This oximeter can be used to measure your blood oxygen saturation (in % SpO<sub>2</sub>) and your pulse rate. It should be used for spot monitoring only and not for continuous monitoring.

The RES5101 Finger-Unit spot check oximeter is intended for such nonmedical uses as sports activities and aviation. It is not intended to diagnose any medical condition or to be used in medical applications.

### Package Contents

1. Finger Pulse Oximeter
2. Lanyard
3. User Manual
4. 2 AAA Batteries

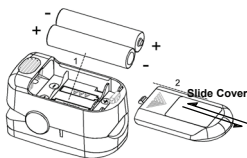
### Precautions for Use

1. Read the manual carefully before use.
2. Pulse oximeters are sensitive to motion artifacts. Keep hands still while taking a reading.
3. Pulse oximeters require sufficient blood flow to obtain proper readings. Poor blood circulation can result in inaccurate readings. If your hands are cold or you have poor circulation, warm your hands by rubbing them together or use another method before attempting to obtain a reading. A tourniquet, blood pressure cuff or other blood flow hindrances may also result in inaccurate readings.
4. Fingernail polish or acrylic nails obstruct the light transmission and may also result in inaccurate readings.
5. Your finger must be clean for a proper reading.
6. The pulse oximeter must be clean for a proper reading.
7. If a reading is difficult to obtain, switch to another finger or to the other hand.
8. There are a number of other conditions which may lead to an inaccurate reading including but not limited to recent medical tests that included an injection of dyes, use of arterial catheters, a weak pulse, low levels of hemoglobin in the blood, low perfusion (the quality of your pulse), elevated levels of dysfunctional hemoglobin, the strength and type of light that you are in while using the pulse oximeter and the existence of cell phones, radios, and fixed transmitters within certain ranges of the pulse oximeter during use.
9. The pulse oximeter will not alert you if your readings are out of normal range.
10. Explosion hazard: Do not use the pulse oximeter in an explosive atmosphere.
11. The pulse oximeter has no SpO<sub>2</sub> alarms; it is not for continuous monitoring, as indicated by the symbol.

- In addition to items described in the Precautions for Use, inaccurate measurements may be caused by FACTORS INCLUDING BUT NOT LIMITED TO:**
1. Autoclaving, ethylene oxide sterilizing or immersing the sensors in liquid.
  2. Significant levels of dysfunctional hemoglobin (such as carboxy-hemoglobin or methemoglobin).
  3. Intravascular dyes such as indocyanine green or methylene blue.
  4. Exposing sensor area to intense light such as direct sunlight.
  5. Excessive user movement.
  6. High-frequency electrosurgical interference and defibrillators.
  7. Venous pulsations.
  8. Hypotension, severe vasoconstriction, severe anemia or hypothermia.
  9. Fingernail polish or add-on fingernails

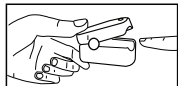
### Battery Installation

1. Install two AAA batteries into the battery compartment. Match the plus (+) and minus (-) signs in the compartment. If the polarities are not matched, damage may be caused to the oximeter.
2. Slide the battery door cover horizontally along the arrow as shown in the picture.
  - NOTE:** Install the batteries in right polarity. Incorrect placement may cause damage to the bracket.
  - NOTE:** Remove the batteries if the pulse oximeter will not be used for long periods of time.
3. The battery indicator symbol on the front panel display will light when the battery voltage is too low for normal operation of the pulse oximeter. Replace the batteries when indicator symbol lights.



### Using the Oximeter

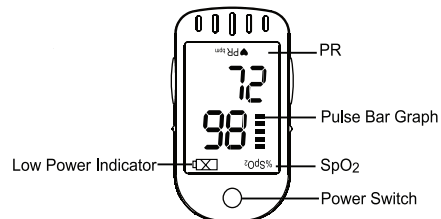
1. Open the clamp as shown in the picture.
2. Place one of your fingers into the opening of the pulse oximeter (your finger should touch the bottom portion) before releasing the clamp.
3. Press the switch button one time on front panel to turn the pulse oximeter on.
4. Keep your hands still for the reading. Do not shake your finger during the test. It is recommended that you do not move your body while taking a reading.
5. Read the data from the display screen.
6. There are four display modes. After turning on the pulse oximeter, each time you press the power switch, the pulse oximeter will switch to another display mode.
7. When you press the power switch for more than one second, the brightness of the pulse oximeter will be changed by degrees. There are ten levels of brightness. The default level is level four.
8. When no signal or low signal is detected, the pulse oximeter will power off automatically in eight seconds.



### Maintenance


1. Clean the pulse oximeter and sensor with a soft cloth dampened with isopropyl alcohol. Do not pour or spray any liquids onto the pulse oximeter. Do not allow any liquid to enter any openings in the device. Allow the pulse oximeter to dry thoroughly before reusing. (The rubber inside of the pulse oximeter is composed of medical grade rubber. It is non-toxic and is not harmful to the skin.)
2. The pulse oximeter requires no routine calibration or maintenance other than replacement of the batteries.

### Brief Description of Front Panel



The height of the Pulse Bar graph indicates the intensity of the pulse and signal strength. The bar should be greater than 30% for a proper reading.








### Technical Specifications

- Display:** LED display  
PR display mode: bargraph  
Low power indication: 
- Battery Standard:** Two AAA 1.5V Alkaline Batteries  
**Power Consumption:** Less than 40mA  
**Resolution:** 1% for SpO<sub>2</sub> and 1bpm for Pulse Rate  
**Measurement Range:** SpO<sub>2</sub>: 70%~100%  
PR: 30bpm~250bpm  
**Measurement Accuracy:** SpO<sub>2</sub>: 70%~100%, ±2%; 0~69%, no definition  
PR: 30bpm~99bpm, ±2bpm; 100bpm~250bpm, ±2%
- Environmental Range:**  
Operation Temperature: 41°F — 104°F (5°C — 40°C)  
Storage Temperature: -13°F — 158°F (-25°C — 70°C)  
Ambient Humidity: 15% — 93% no condensation in operation;  
≤93% no condensation in storage/transport  
Atmospheric pressure: 70kPa~106kPa
- It is recommended that the product be kept in a dry place. A damp environment might affect its lifetime and even might damage the product.  
**Automatic Power Off:** The oximeter will power off automatically after eight seconds when the finger is removed.  
**Declaration**  
EMC of this product complies with IEC60601-1-2 standard.  
The materials which users can come into contact with are non-toxic and comply with ISO10993-1, ISO10993-5 and ISO10993-10.

### Troubleshooting

Problems	Possible Reason	Solution
SpO <sub>2</sub> or PR is not shown normally.	1. Finger is not plugged correctly. 2. User's oxyhemoglobin value is too low to be measured.	1. Retry by plugging the finger. 2. Possible pulse oximeter failure.
SpO <sub>2</sub> or PR is shown unstably.	1. Finger might not be plugged deep enough. 2. Finger is trembling or user's body is in motion.	1. Retry by plugging the finger. 2. Remain still.
The pulse oximeter cannot be powered on.	1. The batteries might be installed incorrectly. 2. The batteries' power might be inadequate or not be there at all. 3. The pulse oximeter might be damaged.	1. Please reinstall the batteries according to the polarity marked inside the battery compartment. 2. Please replace the batteries. 3. Please contact our customer service center.
"Error3," "Error4" and "Error7" displayed on screen.	The product is damaged.	Please contact our customer service center.

### Symbol Glossary

Symbol	Explanation	Symbol	Explanation
IP22	Protected against dripping water		Type BF applied part
	Low power Indication	SN	Serial number
SpO <sub>2</sub> %	Hemoglobin oxygen aaturation	PR bpm	Pulse rate
	Date of manufacture		No SpO <sub>2</sub> alarm
	Attention		Do not dispose of in household waste
	Follow instructions for use		

### Note:

1. Follow local ordinances and recycling instructions regarding disposal or recycling of the device and device components, including batteries.
2. The illustration used in this manual may differ slightly from the appearance of the actual product.

### Warnings:

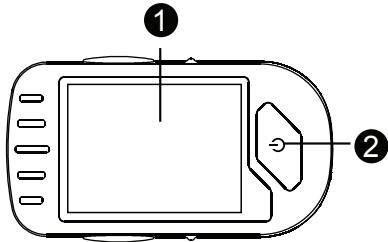
1. Keep the pulse oximeter away from young children. Small parts such as the battery door and the batteries, etc., may be hazardous if swallowed.
2. The lanyard may cause strangulation in conditions that may cause it to twist around the neck.

### Manufactured for

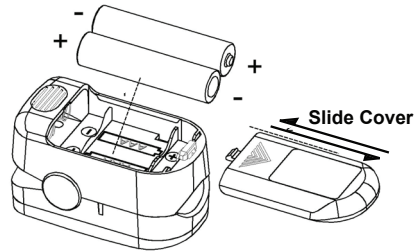
Sunset Healthcare Solutions  
180 N Michigan Ave Ste 2000 Chicago, IL 60601  
www.sunsethcs.com

# Quick Operation Guide

Before using the oximeter, please remove protective sticker covering the display.

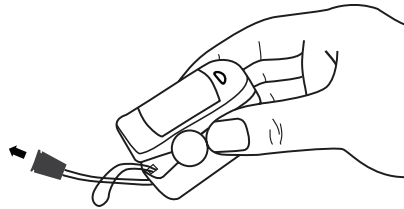
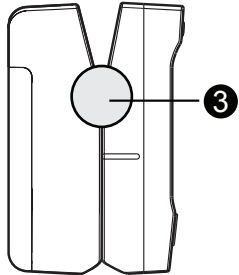


## Battery Installation



Please put in the batteries according to the polarity marked inside the battery compartment.

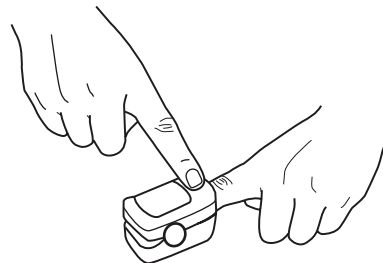
## Lanyard Installation



Tie the lanyard through the hole in the rear of the pulse oximeter.

## Operation

Place one of your fingers into the pulse oximeter to the end and press the switch button one time on front panel to turn it on.



The pulse oximeter has one display mode.



Keep your hands still for the reading.

The oximeter will power off automatically in 8 seconds if there's no finger inside.

## Warnings and Notes

### Warnings:

1. Keep the pulse oximeter away from young children. Small parts such as the battery door and the batteries, etc., may be hazardous if swallowed.
2. The lanyard may cause strangulation in conditions that may cause it to twist around the neck.

### Notes:

1. Read the manual carefully before use.
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3. Follow local ordinances and recycling instructions regarding disposal or recycling of the device and device components, including batteries.

## What is a Pulse Oximeter?

A pulse oximeter is a non-invasive device that indirectly monitors blood oxygen saturation ( $SpO_2$ ) and pulse rate (heart rate). It displays both blood oxygen saturation ( $SpO_2$ ) and pulse rate (heart rate). Pulse oximeters provide an easy way of assessing your blood oxygen level and pulse rate.

## What is $SpO_2$ ?

$SpO_2$  is also known as oxygen saturation. Oxygen saturation is a measure of how much oxygen the blood is carrying as a percentage of the maximum it could carry.

## What is the normal range of $SpO_2$ ?

The normal range for  $SpO_2$  is typically considered from 95%-99%. The  $SpO_2$  measurement may be lower for people who live at high altitudes. Ask your health professional this question as it pertains to you.

## What is the normal range for pulse rate?

The normal resting range for pulse rate is typically considered from 60-100 beats per minute. Ask your health professional this question as it pertains to you.

## What kind of conditions may cause an inaccurate reading?

Cold hands, poor circulation, very weak pulse, movement, fingernail polish and add-on nails may cause inaccurate results.

## The $SpO_2$ is not changing.

$SpO_2$  does not change like pulse rate. It is slow to change.

## The pulse rate is changing rapidly.

Your heart rate changes with emotions, excitement and exercise.

## I do not see the battery light indicator.

The battery light indicator only appears when the battery is low.



- 1 Display Screen
- 2 Power Key
- 3 Shaft Cover
- 4 Battery Box Cover