Wellue oxi 16

Wellue Fingertip Pulse Oximeter User Manual

Brand: Wellue | **Model:** oxi 16

IMPORTANT SAFETY INFORMATION

Disclaimer: This Wellue Fingertip Pulse Oximeter is intended for sports and aviation use only. It is not a medical device and is not intended for medical use, diagnosis, or treatment of any medical condition. Consult a medical professional for any health concerns.

- Do not apply the oximeter to the same location for longer than 2 hours.
- If any abnormal condition is observed, change the position of the oximeter immediately.
- Keep the device away from children and pets.
- Do not use the device in an MRI or CT environment.
- Avoid using the device in environments with flammable anesthetics or other explosive materials.

PRODUCT OVERVIEW

The Wellue Fingertip Pulse Oximeter is a compact, non-invasive device designed to measure blood oxygen saturation (SpO2) levels and pulse rate. It features an easy-to-read display, automatic power on/off, and a built-in memory function for tracking historical data.

Figure 1: The Wellue Fingertip Pulse Oximeter displaying oxygen saturation and pulse rate. This image shows the device's main screen with clear numerical readings for SpO2 and pulse rate, along with a pulse bar graph.

PACKAGE CONTENTS

Upon opening the package, verify that all the following items are included:

- 1 x Wellue Fingertip Pulse Oximeter (Model: oxi 16)
- 2 x AAA Batteries
- 1 x Carry Pouch
- 1 x Lanyard
- 1 x User Manual (this document)

OxySmart

Fingertip Oximeter

User Manual

Model: PC-60F

It's not a medical device. This device is for Sports and Aviation use only and not intended for medical use.

Notes

- Please read the manual very carefully before using this device. Failure to follow these instructions can cause measuring abnormality or damage to the Oximeter.
- The contents contained in this manual are subject to change without notice.
- Information furnished by our company is believed to be accurate and reliable. However, no responsibility is assumed by us for its use, or any infringements of users or other rights of third parties that may result from its use.

Instructions for Safe Operation

- Check the device to make sure that there is no visible damage that may affect user's safety or measurement performance with regard to sensors and clips. It is recommended that the device should be inspected minimally before each use. If there is obvious damage, stop using the device.
- Special attention should be paid while the Oximeter is used constantly under the ambient temperature over 37°C, burning hurt may occur because of over-heating of the sensor at this situation.
- Necessary maintenance must be performed only by qualified service technicians. Users are not permitted to service this device.
- The Oximeter must not be used with devices and accessories not specified in User Manual.

Cautions

- Explosive hazard—DO NOT use the Oximeter in environment with inflammable gas such as some ignitable anesthetic agents.
- DO NOT use the Oximeter while the user is under MRI or CT scanning. This device is NOT MRI Compatible.

Warnings

- Discomfort or pain may appear if using the Oximeter continuously on the same location for a long time, especially for user with poor microcirculation. It is recommended that the Oximeter should not be applied to the same location for longer than 2 hours. If any abnormal condition is found, please change the position of Oximeter.
- DO NOT clip this device on edema or tender tissue.
- The light (the infrared light is invisible) emitted from the device is harmful to the eyes. Do not stare at the light.
- The Oximeter is not a treatment device.
- Local laws and Regulations must be followed when disposing of the device.

Attentions

- Keep the Oximeter away from dust, vibration, corrosive substances, explosive materials, high temperature and moisture.
- The device should be kept out of the reach of children.
- If the Oximeter gets wet, please stop using it and do not resume operation until it is dry and checked for correct operation. When it is carried from a cold environment to a warm and humid environment, please do not use it immediately. Allow at least 15 minutes for Oximeter to reach ambient temperature.
- DO NOT operate the button on the front panel with sharp materials or sharp point.
- DO NOT use high temperature or high pressure steam disinfection on the Oximeter. Refer to the instructions regarding cleaning and disinfection.
- The equipment is IP22 with protection against harmful solid foreign objects and ingress of liquid.
- Please pay attention to the effects of lint, dust, light (including sunlight), etc.

Declaration of Conformity

The manufacturer hereby declares that this device complies with the following standards:

IEC 60601-1: 2012 Medical electrical equipment-Part 1: General requirements for basic safety and essential performance;

ISO 80601-2-61: 2017 Medical electrical equipment-Part 2-61: Particular requirements for basic safety and essential performance of pulse oximeter equipment.

And it also follows the provisions of the council directive MDD 93/42/EEC.
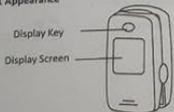
1 Overview

1.1 Appearance

Display Key

Display Screen

Figure 1 Front View

Battery Cover
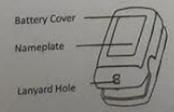
Nameplate

Lanyard Hole

Figure 2 Rear View

Note: the appearance is for demonstration only, please refer to the oximeter you purchased.

1.2 Intended Use

This Fingertip Oximeter is intended for measuring the pulse rate and functional oxygen saturation (SpO₂) through a user's finger. It is intended for sports or aviation use only. It should not be used to diagnose or treat any medical condition.

1.3 Configuration

- SpO2, PR
- Plethysmogram
- Auto on/off
- Pulse bar
- Pulse beep
- Measuring Mode: Spot Check
- Record list

2 Battery Installation

Figure 3 Battery Installation

1. Refer to Figure 3, insert two AAA size batteries into the battery compartment properly, and note the polarity markings.
2. Replace the cover.
- Please make sure that the batteries are correctly installed. Incorrect installation may cause the device not to work.
- Please remove batteries if the device is not being used for more than 7 days to prevent and avoid potential damage from the battery leaking. Any such damage is not covered under the product warranty.

3 Operation

3.1 Start.

Open the clip and put finger inside the rubber cushions of the clip (make sure the finger is in the correct position), and then clip the finger, as shown in figure 4.

Figure 4 Put finger into the Oximeter

Wait 2 seconds, the Oximeter will power on automatically and start to measure;

3.2. END

When finger is out, the Oximeter shuts down automatically.

3.3. Readings display screen

The screen displays as below:

Figure 5   Figure 6

Icon on display screen means the counting-down time if the Oximeter works at Spot check mode. The total measuring time for Spot check mode is 30 seconds.

3.4 Recording & recall

Recording & recall functions are available. At power off status, pressing Display key can bring up record list display screen, as shown in figure 7. In record list screen, press Display key to shift the records page.
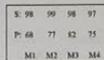
Figure 7

If the time from displaying valid readings to the end of measurement is less than 5 seconds, then no recording will be done.

Up to 12 groups of records can be stored in the record list, the newest record is marked as M1, and the oldest record is marked as M12. The new record will override the previous record.

If the batteries are removed from the device, then the records will be not kept or volatile.

3.5 Menu

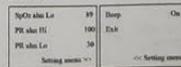When finger is in oximeter, long time pressing display key can enter the setup menu screen.

Figure 8

Menu setup: Short time press Display Key to choose the setting item; Longtime press Display Key to active the setting item, then short time press it to modify the setting parameter; Next, longtime press Display Key to confirm the modification and exit from this setting item. At last, move the setting item to "Save, exit menu", and long time pressing Display Key to store the modification and exit from the setup menu.

"Beep": Pulse beep option. If it is set to on, every pulse beat makes a beep.

Attention to the operation

- The finger should be put into the sensor correctly.
- Do not shake the finger and relax during measurement.
- Do not put wet finger directly into sensor.
- Avoid placing the device on the same limb which is wrapped with a cuff for blood pressure measurement or during venous infusion.
- Do not let anything block the emitting light from device, i.e. do not use finger nail polish/paints.
- Vigorous exercise and electrosurgical device interference may affect the measuring accuracy.
- Nail polish may affect the measuring accuracy, and too long fingernail may cause failure of measurement or inaccurate result.
- Existence of high intensive light sources, such as fluorescence light, ruby lamb, infrared heater or strong sunshine, etc. may cause inaccuracy of measurement result. Please put an opaque cover on the sensor or change the measuring site if necessary.
- If the first reading appears with poor waveform (irregular or not smooth), then the reading is unlikely true, the more stable value is expected by waiting for a while, or a restart is needed when necessary.

4 Technical Specifications

A. SpO2 Measurement
Transducer: dual-wavelength LED sensor with wavelength:
Red light: 663 nm, Infrared light: 890 nm.
Maximal average optical output power: ≤2mW
SpO₂ display range: 35%~100%
SpO₂ measuring accuracy:
≤ 2% for SpO₂ range from 70% to 100%

B. Pulse Rate measurement
PR display range: 30bpm~240bpm
PR measuring accuracy: ±2bpm or ±2% (whichever is greater)

C. Power supply requirement:
2 x LR03 (AAA) alkaline batteries
Supply voltage: 3.0VDC
Operating current: ≤40mA

D. Environmental Conditions:
Operating Temperature: 5°C ~40°C
Operating Humidity: 30%~80%
Atmospheric pressure: 70kPa~106kPa

E. Low Perfusion Performance:
The accuracy of SpO₂ and PR measurement still meet the precision described above when the modulation amplitude is as low as 0.6%.

F. Ambient Light Interference:
The difference between the SpO₂ value measured in the condition of indoor natural light and that of darkroom is less than ±1%.

G. Dimensions:
56 mm (L) × 34 mm (W) × 30 mm (H)
Net Weight: approx. 60g

H. Display:
OLED

I. Classification
The type of protection against electric shock: Internally powered equipment.
The degree of protection against electric shock: Type BF applied parts.
The degree of protection against harmful solid foreign objects and ingress of liquid:
The equipment is IP22 with protection against harmful solid foreign objects and ingress of liquid.
Electro-Magnetic Compatibility: Group I, Class B

5 Packing List

1) Fingertip Oximeter
2) User Manual
3) Batteries
4) Pouch
5) Lanyard

Note: the items and its quantity are subject to change, please refer to your subject in hand.

6 Repair and Maintenance

6.1 Maintenance

The expected service life (not a warranty) of this device is 5 years. In order to ensure its long service life, please pay attention to the maintenance.

- Please change the batteries when the low-voltage indicator lightens.
- Please clean the surface of the device before using, with 75% alcohol wipes, then let it air dry or wipe it dry. Do not allow liquid to enter the device.
- Please take out the batteries if the Oximeter will not be used any more than 7 days.
- The recommended storage environment of the device: ambient temperature: -20°C ~60°C, relative humidity 10%~95%, atmospheric pressure: 50kPa~107.4kPa.
- The Oximeter is calibrated in the factory before sale, so there is no need to calibrate it during its life cycle. Any SpO2 simulators should not be used to validate the accuracy of the Oximeter, they can only be used as functional testers to verify its precision. The SpO2 accuracy claimed in this manual is supported by the clinical study conducted by inducing hypoxia on healthy, non-smoking, light-to-dark skinned subjects in an independent research laboratory.
- If it is necessary to verify the precision of the Oximeter routinely, the user can do the verification by means of SpO2 simulator, or it can be done by the local third party test house. Please note that the specific calibration curve (so called R-curve) should be selected when use of SpO2 simulator, e.g. for Index 2 series SpO2 simulator from Fluke Biomedical Corporation, please set "Make" to "DownLoadMake: KRK", then the user can use this particular R-curve to test the Oximeter. If the SpO2 simulator does not contain "KRK" R-curve, please ask the manufacturer for helping to download the given R-curve into the SpO2 simulator.
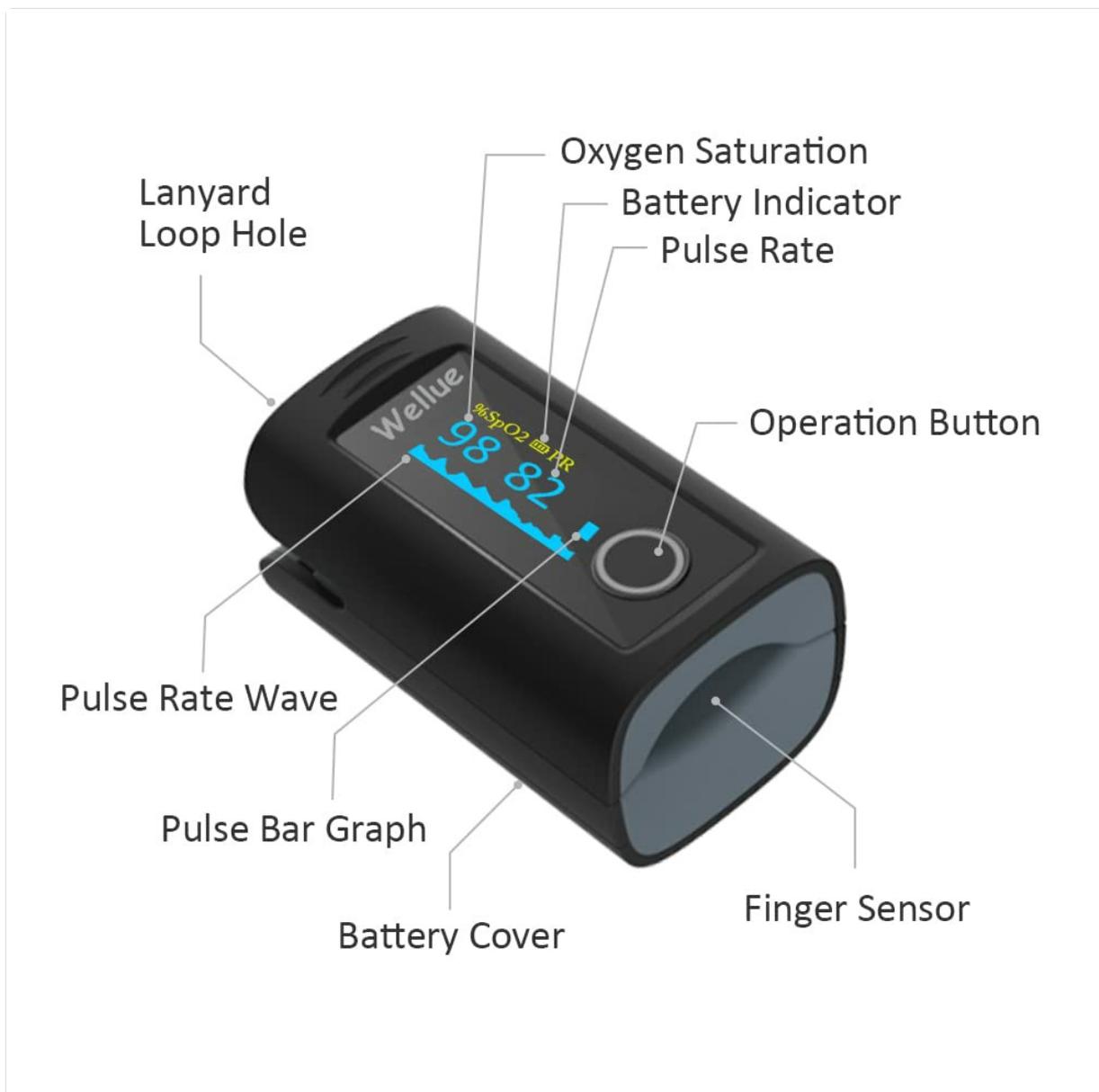- High-pressure sterilization cannot be used on the device.
- Do not immerse the device in liquid.

Figure 2: The product packaging, illustrating the included accessories such as the oximeter, batteries, carry pouch, and lanyard.

Device Components

Familiarize yourself with the different parts of your Wellue Fingertip Pulse Oximeter:

Figure 3: Labeled diagram of the Wellue Fingertip Pulse Oximeter, indicating the Lanyard Loop Hole, Oxygen Saturation display, Battery Indicator, Pulse Rate display, Operation Button, Pulse Rate Wave, Pulse Bar Graph, Battery Cover, and Finger Sensor.

- **Lanyard Loop Hole:** For attaching the included lanyard.
- **Oxygen Saturation (%SpO2):** Displays the percentage of oxygen in the blood.
- **Battery Indicator:** Shows the current battery level.
- **Pulse Rate (PR bpm):** Displays the number of heartbeats per minute.
- **Operation Button:** Used to power on the device and navigate settings.
- **Pulse Rate Wave:** A waveform showing the pulse rhythm.
- **Pulse Bar Graph:** Visual indicator of pulse strength.
- **Battery Cover:** Protects the battery compartment.
- **Finger Sensor:** Where the finger is inserted for measurement.

SETUP

1. Battery Installation

The Wellue Fingertip Pulse Oximeter requires two AAA batteries for operation.

1. Locate the battery cover on the back of the device.

2. Slide the battery cover off.

3. Insert the two AAA batteries according to the polarity indicators (+/-) inside the compartment.

4. Replace the battery cover by sliding it back into place until it clicks securely.

Note: Ensure batteries are inserted correctly. If the device will not be used for an extended period, remove the batteries to prevent leakage.

OPERATING INSTRUCTIONS

1. Taking a Measurement

To obtain an accurate reading:

1. Ensure your finger is clean and free of nail polish or artificial nails.

2. Open the clamp of the oximeter.

3. Insert one finger (preferably the index, middle, or ring finger) into the rubber opening of the oximeter, ensuring the finger is placed correctly with the nail facing upwards.

4. Release the clamp. The device will automatically power on and begin measurement.

5. Keep your hand still during the measurement. Movement can affect accuracy.

6. The SpO2 and Pulse Rate readings will appear on the display within approximately 8 seconds.

Built-in memory

Store up to 12 groups of SpO2 and Pulse Rate in display screen.

2. Understanding the Display

The OLED display shows the following information:

- **%SpO2:** Blood Oxygen Saturation level.
- **PR bpm:** Pulse Rate in beats per minute.
- **Pulse Bar Graph:** Indicates the strength of the pulse.
- **Pulse Rate Wave:** A waveform showing the pulse rhythm.
- **Battery Indicator:** Displays remaining battery life.

Fingertip Oximeter Comparsion Chart

The Lasted Upgraded Version

Normal Version

Built In Memory Menu Setting Sport Check Mode

Figure 5: A magnified view of the oximeter's display, highlighting the SpO2 percentage, pulse rate, and the pulse rate waveform for detailed monitoring.

3. Spot Check Mode

After approximately 30 seconds of continuous measurement, the oximeter will display an analysis result of the pulse rhythm and SpO2. This is the "Spot Check" mode, providing a quick assessment.

Figure 6: The oximeter display in Spot Check mode, indicating "No irregularity found" after a 30-second measurement, along with the SpO2 and PR readings.

4. Built-in Memory Function

The device can store up to 12 groups of SpO2 and Pulse Rate data. You can quickly view your last 12 historical data points directly on the screen with a single click of the operation button.

Analysis result of pulse rhythm and SpO2 & PR will be displayed on the screen when the measurement ends up for "Spot check" mode.

Figure 7: Multiple views of the oximeter's screen demonstrating the built-in memory feature, showing stored SpO2 and Pulse Rate data groups (M1-M12).

5. Audible and Visual Reminders

The oximeter is equipped with an alert system. If your oxygen level or pulse rate values exceed preset limits during measurement, the device will emit an audible beep, and the exceeding value will flash on the screen to draw your attention.

MAINTENANCE

1. Cleaning the Device

To ensure hygiene and proper function:

- Clean the surface of the oximeter with a soft cloth dampened with 70% isopropyl alcohol.
- Do not immerse the device in water or any other cleaning solution.
- Allow the device to air dry completely before storage or next use.

2. Storage

Store the oximeter in a cool, dry place, away from direct sunlight, extreme temperatures, and humidity. Use the provided carry pouch for protection when not in use.

3. Battery Replacement

When the battery indicator shows low power, replace the batteries promptly to ensure accurate readings. Refer to the "Battery Installation" section for instructions.

TROUBLESHOOTING

If you encounter issues with your Wellue Fingertip Pulse Oximeter, refer to the table below for common problems and solutions.

Problem	Possible Cause	Solution
Device does not turn on.	Batteries are dead or incorrectly installed.	Replace batteries or ensure they are inserted with correct polarity.
Inaccurate or unstable readings.	Finger not inserted properly; excessive movement; cold fingers; nail polish/artificial nails.	Reinsert finger correctly, keep still, warm hands, remove nail polish/artificial nails.
Display shows "Finger Out" or similar message.	Finger not detected or removed.	Ensure finger is fully inserted into the sensor.
Audible alarm sounds.	SpO2 or Pulse Rate values are outside preset limits.	Check readings. If values are consistently low or high, consult a medical professional.

SPECIFICATIONS

Technical specifications for the Wellue Fingertip Pulse Oximeter (Model: oxi 16):

- **Model Name:** Wellue Bluetooth Wireless Fingertip Pulse Oximeter
- **Item Model Number:** oxi 16
- **Product Dimensions:** 3.78 x 2.87 x 1.65 inches
- **Weight:** 2.82 ounces
- **Power Source:** 2 x AAA batteries (included)
- **Measuring Range (SpO2):** 95-100% (typical, actual range may vary)
- **Display Type:** OLED
- **Manufacturer:** Creative Medical
- **First Available Date:** March 26, 2020
- **Color:** Black

WARRANTY AND SUPPORT

For detailed warranty information and customer support, please refer to the official Wellue website or contact their customer service.

Additional resources, including PDF versions of the user guide and manual, are available for download:

- User Guide (PDF)
- User Manual (PDF)

For further assistance, you may visit the Wellue Store on Amazon.

Related Documents - oxi 16

[OxySmart PC-60FW Fingertip Oximeter User Manual - Sports & Aviation Use](#)
User manual for the OxySmart PC-60FW Fingertip Pulse Oximeter by Wellue. Learn about its features for measuring SpO2 and pulse rate, designed for sports and aviation. Not a medical device.

[Wellue POD-2 Fingertip Oximeter: Operation Guide for SpO2 and Pulse Rate Monitoring](#)
Concise operation guide for the Wellue POD-2 Fingertip Oximeter. Learn how to use this device for measuring Blood Oxygen Saturation (SpO2) and Pulse Rate (PR) accurately. Includes features, specifications, and important operational notes.

[Wellue O2Ring Wearable Oxygen Monitor User Manual](#)
Comprehensive user manual for the Wellue O2Ring, a wearable oxygen monitor. Learn about its intended use, safety warnings, device overview, operation for charging, powering on/off, starting/stopping measurements, data syncing, app compatibility, PC software, maintenance, and troubleshooting. Includes detailed specifications.

[Wellue O2Ring Pulse Oximeter User Manual - SpO2 & Pulse Rate Monitoring](#)
User manual for the Wellue O2Ring Pulse Oximeter, detailing its features, usage, specifications, troubleshooting, and safety information for monitoring oxygen saturation (SpO2) and pulse rate.

[Oxyfit Fingertip Oximeter User Manual | Wellue](#)
Comprehensive user manual for the Wellue Oxyfit Fingertip Oximeter. Learn about intended use, warnings, operation, troubleshooting, and specifications for SpO2 and pulse rate monitoring.

[Wellue Fingertip Oximeter User Manual - POD-1, POD-1W](#)
User manual for the Wellue Fingertip Oximeter (Models POD-1, POD-1W). Learn how to measure SpO2 and pulse rate for general wellness, sports, and aviation use. Includes safety instructions, operation guide, and technical specifications.