JOHN BUNN®
by graham-field

OXYREAD FINGERTIP PULSE OXIMETER

MODEL JBO2017 OPERATOR MANUAL

GENERAL DESCRIPTION

The John Bunn JBO2017 OxyRead Fingertip Pulse Oximeter provides a simple way to spot-check users by combining the sensor and monitor into one integrated, compact, easy to use device. The oximeter measures pulse oxygen saturation (SpO_2) value, pulse rate value, and pulse strength. When a finger is inserted into the sensor's rubber cushion, the SpO_2 value automatically displays. The pulse bar graph displays the user's pulse beat, and the bar graph's height shows pulse strength. The oximeter, which is powered by two AAA batteries, features a low-battery indicator and powers off automatically in eight seconds when not in use.

Product Accessories (Included)

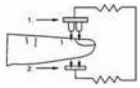
1. One lanyard
2. Two AAA batteries
3. One protective cover
4. One operator manual

Principle of Measurement

Two beams of different wavelength (660 ±3 nm glow and 905 ±10 nm near infrared light) are focused onto a human nail tip through a clamping finger-type sensor. A measured signal obtained by a photosensitive element, through processes of electronic circuits and microprocessor, will be shown on the oximeter's display.

Principle of Operation Diagram

See illustration and descriptions below.



1	Red and Infrared Emission Tube
2	Red and Infrared Receipt Tube

INTENDED USE

The intended use of the OxyRead Fingertip Pulse Oximeter is the measurement and display of the functional oxygen saturation of arterial hemoglobin (SpO_2) and pulse rate (PR) of adults and pediatric users in hospital, ambulatory, home, and EMS (Emergency Medical Service) environments. The Pulse Oximeter is intended for spot-checking these levels.

Contraindications (⚠ WARNINGS):

•If you do not understand any part of these instructions, contact a healthcare professional for direction in the use of this product.

•This device is not intended for continuous monitoring.

•Do not use this device in an explosive atmosphere.

•Do not use this device in an MRI or CT environment.

INACCURATE MEASUREMENTS MAY BE CAUSED BY THE FOLLOWING:

•Autoclaving, ethylene oxide sterilizing, or immersing the device in liquid

•Significant levels of dysfunctional hemoglobins (such as carbonxy- hemoglobin or methemoglobin)

•Intravascular dyes such as indocyanine green or methylene blue

•High ambient light — shield the sensor area (with a surgical towel, or direct sunlight, for example) if necessary

•Excessive user movement

•High-frequency electrosurgical interference

•Venous pulsations

•Placement of a sensor on an extremity with a blood pressure cuff, arterial catheter, or intravascular line

•User hypotension, severe vasoconstriction, severe anemia, or hypothermia

•User cardiac arrest or shock

•Improper finger placement, e.g. fingernail not facing upward

•Fingernail polish or false fingernails.

SAFETY — PRECAUTIONS FOR USE

⚠WARNING: Indicates a potential hazard situation or unsafe practice that, if not avoided, could result in death or serious injury. WARNING statements follow:

Before use, carefully read the manual.

The pulse oximeter has no alarms. Do not use the pulse oximeter in situations where alarms are required. It is not intended for continuous monitoring.

The pulse oximeter is intended only as an adjunct in user assessment. It must be used in conjunction with other methods of assessing clinical signs and symptoms.

WARNING: Cancer and Reproductive Harm - www.p65warnings.ca.gov.

⚠CAUTION: Indicates a potential hazard or unsafe practice that, if not avoided, could result in moderate or minor personal injury. CAUTION statements follow:

Check the pulse oximeter sensor application site frequently to determine the positioning of the sensor and circulation and skin sensitiv ity of the user.

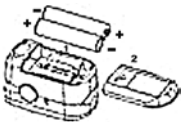
Do not stretch the adhesive tape while applying the pulse oximeter sensor. This may cause inaccurate readings or skin blisters.

Prolonged use or the user's condition may require changing the sensor site periodically. Change sensor site and check skin integrity, circulatory status, and correct alignment at least every 4 hours.

▲ NOTICE: Indicates a potential hazard or unsafe practice that, if not avoided, could result in product/property damage.

SETUP

Battery Installation



1. Open battery compartment cover.
2. Install two AAA batteries in battery compartment, ensuring polarities are correct.
3. Close battery compartment cover: Push cover horizontally along the arrow as shown at right.

▲ NOTICE: Ensure battery polarities are correct, or the device could be damaged.

Lanyard Installation

1. Thread the thinner end of the lanyard through the oximeter loop.
2. Thread the thicker end of the lanyard through the threaded end, then pull it tightly.

OPERATION INSTRUCTIONS

1. Use isopropyl alcohol to clean the test finger and the rubber inside the oximeter that touches the finger.
2. Place clamp over fingernail as shown at right; insert finger, **fingernail up as shown**.
3. Press button on front panel once. **User's finger and body must remain still during measurement.**
4. See display: the SpO_2 value automatically displays, the pulse bar graph displays the pulse rate, and the bar graph's height shows the pulse strength.

MAINTENANCE AND STORAGE

▲ NOTICE: This device contains no serviceable parts. Do not disassemble.

▲ NOTICE: Remove the batteries if the oximeter will not be used for a long period of time.

▲ NOTICE: Do not autoclave, sterilize with ethylene oxide, or immerse the device in liquid.

▲ NOTICE: See SPECIFICATIONS/Environmental Requirements for operation and storage requirements. A wet ambience could damage this product and shorten its lifetime.

▲ NOTICE: Recycle or dispose of this device and its used batteries in observance of local regulations.

Info: Use isopropyl alcohol to clean the rubber (inside the oximeter, that touches the finger) and the test finger before and after each test. The rubber inside the oximeter is medical rubber, which has no toxins, and is not harmful to the skin.

Info: Replace the batteries when low battery indicator illuminates.

SPECIFICATIONS

Display Type	LED (Light Emitting Diode)		
SpO_2	Measurement range	70-99%	
	Accuracy	70% - 99%: ±2%	
		≤69% : no definition	
Pulse Rate	Measurement range	30-235 BPM	
	Accuracy	30 ~ 99 BPM: ±2 BPM	
		100 ~ 235 BPM: ±2%	
	Pulse Intensity	Bargraph Indicator	
Power Requirement	Two AAA alkaline Batteries		
Power Consumption	<40 mA		
Low Power Indicator			
Battery Life	~ 30 hours of continuous operation		
Dimension (L x W x H)	2.20″ ~ 2.44″ x 1.26″ ~ 1.50″ x 1.34″ ~ 1.50″ (56 mm ~ 62 mm x 32 mm ~ 38 mm x 34 mm ~ 38 mm)		
Weight	1.59 oz ~ 2.12 oz (0.10 lb ~ 0.13 lb) (45 g ~ 60 g) including two AAA batteries		
Environmental Requirements	Temperature	Operation	41°F ~ 104°F (5°C ~ 40°C)
		Storage	-13°F ~ 158°F (-25°C ~ 70°C)
	Humidity (non-condensing)	Operation	15% ~ 93% RH
		Storage	≤93% RH
Interference Resistance Capacity against Ambient Light	Device works normally when mixed noise produced by BIO-TEK INDEX Pulse Oximeter tester		

DECLARATION

This product's EMC complies with IEC60601-1-2 standard.

The materials with which the user can come into contact have no toxicity, no action on tissues, and comply with ISO10993-1, ISO10993-5 and ISO10993-10.

GUIDANCE AND MANUFACTURER'S DECLARATION: ELECTROMAGNETIC EMISSIONS FOR ALL EQUIPMENT AND SYSTEMS

Guidance and manufacturer's declaration – electromagnetic emission		
The Pulse Oximeter is intended for use in the electromagnetic environment specified below. The customer or the user of the Pulse Oximeter should assure that it is used in such an environment.		
Emission Test	**Compliance**	**Electromagnetic environment – guidance**
RF emission CISPR 11	Group 1	The Pulse Oximeter uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emission CISPR 11	Class B	The Pulse Oximeter is suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.

TROUBLESHOOTING

Problem	Possible reason	Solution
SpO_2 or PR cannot be displayed normally	1. User's finger is incorrectly inserted 2. User's Oxyhemoglobin value is too low to be measured	1. Reinsert user's finger 2. Attempt several times to obtain a reading; If sure that no problem exists, obtain further clinical examination
SpO_2 or PR display is unstable	1. Finger may not be inserted deeply enough 2. Finger trembling or user moving	1. Reinsert finger 2. Ask user to remain still

Troubleshooting continued

Problem	Possible reason	Solution
Oximeter cannot be powered on	1. Battery power may be inadequate or batteries may not be installed 2. Batteries may be installed incorrectly 3. Oximeter may be damaged	1. Replace batteries 2. Reinstall batteries 3. Contact GF distributor
Indicator lamps are suddenly off	1. Device automatically powers off when no signal is detected for longer than 8 seconds 2. Batteries too weak to power device	1. Normal 2. Replace the batteries
"Error7" displays	1. Low power 2. Emission diode damaged 3. Current control circuit malfunction	1. Replace batteries 2. Contact GF distributor 3. Contact GF distributor

SYMBOL DEFINITIONS

Symbol	Definition	Symbol	Definition
	Type BF applied part		Power switch
	Follow instructions for use	SN	Serial Number
% SpO_2	Oxygen saturation		Manufacturer
BPM	Heart rate (BPM)	IP22	Degree of protection against ingress of water
	Low power indicator		Storage temperature and relative humidity
	No SpO_2 Alarm		Date of Manufacture
			Conformity to WEEE Directive

Info: The illustration used in this manual may differ slightly from the appearance of the actual product.

LIMITED WARRANTY

SCOPE OF WARRANTY

GF Health Products, Inc. ("GF") warrants to the Original Purchaser only that it will replace or repair components, at GF's sole discretion, that are defective in material or workmanship under normal use and service. All warranties are conditioned upon the proper use of the products strictly in accordance with good commercial practice and applicable GF instructions and manuals, including p roper use and maintenance. To the extent that a component is warranted by a third party, GF conveys all of its rights under that warranty to the original purchaser, to the extent permitted. Original Purchaser is one who purchases this product new and unused from GF or a GF Distributor.

This limited warranty shall only apply to defects that are reported within the applicable warranty period and which, upon examination by GF or its authorized representative, prove to be a warranty item. This limited warranty is not transferable.Within the guidelines set forth in this document, this product is warranted for one (1) year. The applicable warranty period shall commence from date of shipment to the Original Purchaser, unless there is an expiration date on the component in which case the warranty shall expire on the earlier of warranty period or the expiration date.

OBTAINING WARRANTY SERVICE

This limited warranty shall only apply to defects that are reported to the Distributor from whom the Customer purchased the product within the applicable warranty period. If there is not a Distributor, you must contact GF directly by calling 1.770.368.4700, sending a fax request to 1.770.368.2386, or by e-mailing a request to cs@grahamfield.com. Specific directions will be provided by the Customer Service Representative. Failure to abide by the specific directions will result in denial of the warranty claim.

EXCLUSIONS

The warranty does not cover and GF shall not be liable for the following:

1) Defects, damage, or other conditions caused, in whole or in part, by misuse, abuse, negligence, alteration, accident, freight damage, tampering or failure to seek and obtain repair or replacement in a timely manner;
2) Products which are not installed, used, or properly cleaned and maintained as required in the official manual for the applicable product;
3) Products considered to be of a non-durable nature including, but not limited to: casters, filters, fuses, gaskets, lubricants, and charts;
4) Accessories or parts not provided by GF;
5) Charges by anyone for adjustments, repairs, replacement parts, installation or other work performed upon or in connection with such products which are not expressly authorized in writing, in advance, by GF;
6) Any labor or shipping charges incurred in the replacement part installation or repair;
7) Costs and expenses of regular maintenance and cleaning; and
8) Representations and warranties made by any person or entity other than GF.

ENTIRE WARRANTY, EXCLUSIVE REMEDY AND CONSEQUENTIAL DAMAGES DISCLAIMER

THIS WARRANTY IS GF'S ONLY WARRANTY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. GF MAKES NO IMPLIED WARRANTIES OF ANY KIND INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IF ANY MODEL OR SAMPLE WAS SHOWN TO THE CUSTOMER, SUCH MODEL OR SAMPLE WAS USED MERELY TO ILLUSTRATE THE GENERAL TYPE AND QUALITY OF THE PRODUCT AND NOT TO REPRESENT THAT THE PRODUCT WOULD NECESSARILY CONFORM TO THE MODEL OR SAMPLE IN ALL RESPECTS.

THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PARTS. GF SHALL NOT BE LIABLE FOR AND HEREBY DISCLAIMS ANY DIRECT, SPECIAL, INDIRECT, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO: DAMAGES FOR LOSS OF PROFITS OR INCOME, LOSS OF USE, DOWNTIME, COVER, OR EMPLOYEE OR INDEPENDENT CONTRACTOR WAGES, PAYMENTS AND BENEFITS.

The warranties contained herein contain all the representations and warranties with respect to the subject matter of this document, and supersede all prior negotiations, agreements and understandings with respect thereto. The recipient of this document hereby acknowledges and represents that it has not relied on any representation, assertion, guarantee, warranty, collateral contract or other assurance, except those set out in this document. Some states do not allow the exclusion of certain remedies; in those instances that state's law will control. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For additional information on this product or this warranty, please contact a GF Customer Service Representative.

NOTES:

1) Additional terms and conditions may apply.
2) Freight claims must be notated on the appropriate shipping documents and must be made with immediacy. International, federal and state regulations govern specific requirements for freight claims. Failure to abide by those regulations may result in a denial of the freight claim. GF will assist you in filing the freight claim.
3) Claims for any short shipment must be made within three (3) days of the invoice date.

graham field
1.770.368.4700

Information contained herein is subject to change.
The most current and complete product information can be found on our website.
www.grahamfield.com

Follow us on