

# Index 2

## Pulse Oximeter Simulator

### Technical Data



The Index 2 is the most versatile optical simulator for oximeters on the market today. This lightweight, portable tool includes preloaded manufacturers' R-curves and the ability to define other "makes" for most pulse oximeters.

Motion presets, player mode, transmission level control (TLC), and computer commands boost testing ability. The Index 2 can also be configured to include an optional electrical simulation feature with probe test. Optical and electrical simulations allow technicians to isolate problems quickly. The probe test identifies defective probes with quantitative test results..

### Key Features

- Portable
- 10 preloaded manufacturers' R-curves
- User-definable "makes" for most other manufacturers
- New R-curves for Masimo, Nonin and Philips Medical Systems (formerly Agilent / H-P) oximeters
- Six downloadable R-curve spaces available
- Simultaneous simulation of motion and arterial-oxygen levels
- Arterial wave-amplitude scale, calibrated in units of perfusion
- Tap/shiver motion simulations to explore the impact of motion
- RS232 port for computer control
- Physiological finger for complete SpO<sub>2</sub> tests
- Electrical simulations with probe testing (optional)

## Technical Specifications

**O<sub>2</sub>**  
Range: 35 % to 100 %  
Resolution: 1 %  
Accuracy: 100 % to 75 %:  $\pm 1\%$   $\pm$  accuracy of the pulse oximeter under test; 74 % to 50 %:  $\pm 3\%$   $\pm$  the accuracy of the pulse oximeter under test; < 50 % unspecified  
Repeatability:  $\pm 1$  standard deviation

### Rate

Range: 30 BPM to 250 BPM  
Resolution: 1 BPM  
Accuracy:  $1\% \pm 1$  BPM

### Pulse Amplitude

Range: 0 % to 100 % of nominal pleth amplitude  
Resolution: 1 %  
Pulse amplitude is 20 % of maximum  
pass-through brightness

### Probe Test

Continuity/Resistance  
Test Matrix: Measures all combinations of possible interconnections in an XX point matrix  
Range: 250  $\Omega$  to 150 k $\Omega$   
Accuracy:  $\pm 5\%$  of reading

### LED/Detector Voltage Test

Test Format: Measures the voltage drop across Red LED, infrared LED, and the photo detector when the internally generated test signal is applied  
Test Signal: Constant current source @ 1 mA  
Open Circuit: 2.5 V max  
Measurement/Display Range: 0 V to 4 V  
Accuracy:  $\pm 5\%$  of reading, 0.4 V to 4 V

### Dynamic Test

Test Format: Photodetector/diode response to both the red and infrared light generated by the probe when pulsed by an internal test signal  
Test Signal: Pulsed between the two LEDs; constant current level @ 1 mA  
Test Results: Nominal range of 0 to 2000

### Checksum

Sum of all locations in the program chip; for service use only

### General Information

Display: 2-line x 24-character super twist LCD  
Battery Life: At least 4 hours of continuous use  
Dimensions: 18 in L x 16 in W x 9 in H (45.7 cm L x 40.6 cm W x 22.9 cm H)  
Weight: 10 lb (4.5 kg)

# FLUKE®

## Biomedical

## Ordering Information

### Model

**2250232:** Index 2-USA 120V  
**2395290:** Index 2-SHK250V

### Standard Accessories

**2226196:** Operator's manual  
**2213080:** Battery charger (USA 120 Vac to 12 Vdc)  
**2213102:** Battery charger (Euro/Schuko 220 Vac to 12 Vdc)

### Optional Accessories

**2248568:** Multipurpose hard-sided watertight carrying case  
**2204282:** Soft vinyl carrying case  
**2200102:** Interface cable, medTester to Index 2 (RS232; Female DB25 to female DB9)

### About Fluke Biomedical

Fluke Biomedical is the world's leading manufacturer of quality biomedical test and simulation products. In addition, Fluke Biomedical provides the latest medical imaging and oncology quality-assurance solutions for regulatory compliance.

Today, biomedical personnel must meet the increasing regulatory pressures, higher quality standards, and rapid technological growth, while performing their work faster and more efficiently than ever. Fluke Biomedical provides a diverse range of software and hardware tools to meet today's challenges.

### Fluke Biomedical Regulatory Commitment

As a medical device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 certified and our products are:

- FDA Compliant
- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required

## Fluke Biomedical.

*Better products. More choices. One company.*

### Fluke Biomedical

PO Box 9090, Everett, WA 98206-9090 USA

### Fluke Biomedical Europe AS

Vegamot 8, N-7048 Trondheim, Norway

### For more information, contact us:

In the U.S.A. (800) 648-7952 or  
Fax (425) 446-5629  
In Europe/M-East/Africa +47 73954700 or  
Fax +47 73954701  
From other countries +1 (425) 347-6100 or  
Fax +1 (425) 446-5629  
Email: [sales@flukebiomedical.com](mailto:sales@flukebiomedical.com)  
Web access: <http://www.flukebiomedical.com>

©2006 Fluke Biomedical. All rights reserved.  
Specifications subject to change without notice.  
Printed in U.S.A.  
LIT050