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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
- RS-232 port for computer control
- Physiological finger for complete SpO_2 tests
- Electrical simulations with probe testing

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Specifications

O_2	
Range	35 % to 100 %
Resolution	1 %
Accuracy	100 % to 75 %: ± 1 % ± accuracy of the pulse oximeter under test; 74 % to 50 %: ± 3 % ± the accuracy of the pulse oximeter under test; < 50 % unspecified
Repeatability	± 1 standard deviation
Rate	
Range	30 BPM to 250 BPM
Resolution	1 BPM
Accuracy	1 % ± 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 Ω to 150 kΩ
Accuracy	± 5 % of reading
Checksum	Sum of all locations in the program chip; for service use only
LED/detector voltage test	
Test format	Measures voltage drop across Red LED, infrared LED, and 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	± 5 % of reading, 0.4 V to 4 V
Dynamic test	
Test format	Photodetector/diode response to both 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
Battery charger	Lead acid battery charger only
Input	100 V to 250 V, 50 Hz to 60 Hz, 0.3 A
Output	+ 12 V dc, 0.5 A
General specifications	
Display	2-line x 24-character super twist LCD
Battery life	At least 4 hours of continuous use
Operating temperature	15 °C to 35 °C (59 °F to 95 °F)
Storage temperature	0 °C to 50 °C (32 °F to 122 °F)
Humidity	10 % to 90 % non-condensing
Dimensions (WxDxH)	25.4 cm x 25.4 cm x 10.2 cm (10 in x 10 in x 4 in)
Weight	4.5 kg (10 lb)

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Ordering information

Model Index 2_{XLF} Pulse Oximeter Simulator – Optical Finger Simulation
INDEX2LF-USA120V United States, 120 V
INDEX2XLF-SHK250V Shuko, 250 V
INDEX2XLF-AUS250V Australia, 250 V
INDEX2XLF-UK250V United Kingdom, 250 V
INDEX2LF-BRAZ Brazil, 250 V
INDEX2LF-JPN100V Japan, 100 V

Model Index 2_{XLFE} Pulse Oximeter Simulator – Optical Finger and Electrical Simulation with Probe Test
2250244 United States, 120 V
2395309 Shuko, 250 V
2399921 Australia, 250 V
2399939 United Kingdom, 250 V
INDEX2LFE-BRAZ Brazil, 250 V
2447465 Japan, 100 V

Standard accessories
5171010 Operators Manual
INDEX2-CHRG/US Battery Charger
Nellcor and Ohmeda Electrical Simulation and Probe Test Cable (for Index 2_{XLFE} only)

Optional accessories
3362013 Soft Vinyl Carrying Case
3010-0441 Interface Cable, medTester to Index 2 (RS-232; Female DB-25 to Female DB-9)

Index® 2_{XLF} and Index® 2_{LXFE} Pulse Oximeter Accessories
INDEX2-CHRG/US Battery Charger, 100 V ac to 250 V ac, 12 V, 500 MA Lead-Acid US Cord
PRINTR/414-US120V Printer, Seiko DPU-414-30B, with 120 V (2235375) power supply
(**Note**: requires additional purchase of parallel printer cable 2238072)
61096 Printer 120 V Power Supply
71072 Parallel Printer Cable, D25M to C36M
97116 DPU-414 and DPU-411 Printer Paper (minimum seven rolls)
3362013 Soft Vinyl Carrying Case
9530-0064 Multi-Purpose Hard-Sided Watertight Carrying Case (contains "pick and pluck" foam) (Dimensions: 17 in L x 11.75 in W x 6 in H)

Index® 2_{XLFE} Pulse Oximeter Accessory Cables – Electrical Simulation Cables
5170520 BCI™ (3101)
5170518 Criticare™ (504)
INDEX-2-4401 Criticare™ (with D-SUB Connector)
5170516 Datascope™ (Passport)
5170528 Datex
5170533 Hewlett Packard
5170527 Masimo
5170524 Nellcor (N100, N200 and N3000)
5170514FG Nihon-Kohden™ (Lifescope)
5170530 Nonin
5170512 Novametrix™
5170525 Ohmeda
5170510FG Respironics™
5170532 Universal
INDEX2-4405 Philips Medical (with D-Connector)
GE/Ohmeda 3700/3800/3900 Ver 3

Index® 2_{XLFE} Pulse Oximeter Accessory Cables – Probe Test Cables
5170521 BCI™ (3101)
5170519 Criticare™ (504)
INDEX-2-4402 Criticare™ (with D-SUB Connector)
5170517 Datascope™ (Passport)
5170529 Datex
5170534 Hewlett Packard
5170535 Masimo
5170508 Nellcor (N100, N200 and N3000)
5170515FG Nihon-Kohden™ (Lifescope)
5170508 Nonin
5170513 Novametrix™
5170506 Ohmeda
5170511FG Respironics™
5170531 Universal
INDEX2-4406 Philips Medical (with D-Connector)

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. Highly credentialed and equipped with a NVLAP Lab Code 200566-0 accredited laboratory, Fluke Biomedical also offers the best in quality and customer service for all your equipment calibration needs.

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 test device manufacturer, we recognize and follow certain quality standards and certifications when developing our products. We are ISO 9001 and ISO 13485 medical device certified and our products are:
- CE Certified, where required
- NIST Traceable and Calibrated
- UL, CSA, ETL Certified, where required
- NRC Compliant, where required

Fluke Biomedical.
Better products. More choices. One company.

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