



Oxitest Plus 7

Pulse Oximeter Tester



ES601 Plus System Connectivity

Datrend Systems was one of the very early innovators of Pulse Oximetry simulation products with the original Oxitest and Oxitest Plus 7 Pulse Oximetry Testers back in the early and mid 1990's. These original products appeared in the worldwide market under a different brand back then, but the design and manufacturing was all done by Datrend Systems. Even the basic colors and product appearance remain the same today as they were back then. Many of these early models are still in use around the world, attesting to the quality and longevity of the Oxitest design, and to Datrend's design concepts and capabilities overall. Since these early days of the Oxitest platform, the Oxitest has undergone many improvements and

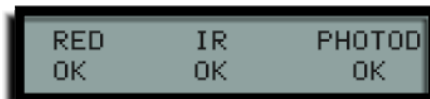


enhancements, which have resulted in the current Oxitest Plus 7 platform. The Oxitest Plus 7 features the exclusive Nellcor-Puritan Bennett sensor port, developed in close cooperation with Nellcor® (now a division of Covidien®). This exclusive feature allows correct selection of the instrument's simulation output to the specific R-Cal value of the attached Nellcor® probe. The front panel keyboard design makes adjustment of the five preset oxygen saturation levels, six preset heart rates and four preset amplitudes a breeze. In addition, features such as Signal Artifact simulations, preset patient parameters, Alarm Testing and Report printing make Oxitest Plus 7 truly unique.

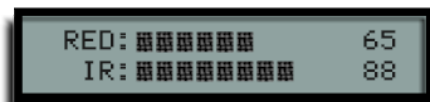
The Oxitest Plus 7 is also part of the Datrend ES601 Plus System Connectivity Family, and can be connected to and controlled by the ES601 Plus Automated Electrical Safety & Performance Analyzer. The ES601 Plus contains sample autosequences for running different test and simulation scenarios with the Oxitest Plus 7, all of which are fully editable for customized applications.

A great combination for all your SpO₂ testing!

Sensitest provides test capability for all types of SpO₂ probes in the biomedical or clinical environment. Don't just discard suspected probes when you "think" they are not functioning properly. Use the Sensitest to determine whether they are really functioning properly or not. Sensitest is so simple to use, you can even give it to your clinical staff to keep in vital monitoring areas as a test tool!



MODE 1 Tests:
Continuity checks for the red LED, the infrared LED, and the photodiode circuits.



MODE 2 Tests:
Measures and displays the photodiode's response to red and infrared LED's.



Sensitest

SpO₂ Sensor Tester

The Oxitest Plus 7 & Sensitest are backed by the Datrend Systems 5-Year Warranty!

Oxitest Plus 7

Saturation (SpO₂): Five clinically important presets: 97%, 93%, 90%, 80%, and 70% for all supported oximeters, plus 55% SpO₂ preset available when testing Masimo, Nellcor and Nellcor OEM oximeters (e.g. Critikon Dinamap, Protocol PROPAQ). Incremental 1% adjustments also available

SpO₂ Accuracy: All supported oximeters except Datex and Invivo oximeters: ±1% @ 97, 93, 90, 80, 70% SpO₂

Datex, Invivo oximeters: ±1% @ 97, 93% SpO₂

±2% @ 90, 80, 70% SpO₂

Masimo, Nellcor and Nellcor OEMs only: ±1% @ 55% SpO₂

Nellcor accuracy specified with either DS100A sensor, or with SpO₂ calibration selected via Nellcor Port.

Heart Rate: Variable from 20 to 250 BPM in 1 BPM steps
Presets: 30, 60, 90, 120, 180, 240 BPM, Accuracy: ± 1 BPM

Pulse Amplitude: Variable from zero (no blood flow) to 100% (normal adult pulse) in 1% steps.
Presets: 100%, 30%, 10%, and 5%, Accuracy: ± 1%

Signal Artifact: Four preset simulations:

Movement

Tapping (Spike artifact)

Shivering (Tremor artifact)

Shake Table (2.5Hz Sinewave)

Auto Presets: Nine preset patient simulations. Default Auto Presets:

Normal Adult	Hypoxia	Movement Artifact
Tachycardia	Bradycardia	Neonatal
Low Perfusion	No Perfusion	Tremor (Shivering Artifact)

Auto Preset parameters may be user-programmed via the RS-232 port.

Alarm Tests: Five automated test sequences for determining oximeter alarm response time to Low SpO₂, Low Heart Rate; High Heart Rate; Low Perfusion; and Motion Artifact conditions. Also determines time required for oximeter alarm to self-clear after test conditions are returned to normal.

Alarm Test parameters may be user-programmed via the RS-232 port.

Approvals: CSA / UL, CE (EN55022:1994 Class B; EN61000-4-3 Level A; IEC 801-2 Level B; IEC801-4 Level B; EN61010-1; IEC 1010-1)



8000-080 120V, North America
8000-081 230V, United Kingdom
8000-082 230V, EU
8000-083 230V, Germany

Memory: Auto Preset and Alarm Test results saved in battery-backed, non-volatile Memory, along with up to 20 PASS/FAIL records from manually-conducted tests. Test results in Memory may be printed as a Test Report via optional external Printer, or may be downloaded via RS-232 port to personal computer or automated tester.

User Interface: Display: LCD - 20 character x 2 line
Keypad - 15 keys: PULSE OX, SPO₂ (%), HEART RATE (preset), HR▲, HR▼, PULSE AMP (preset), PUL▲, PUL▼, PASS, FAIL, AUTO (preset), ALARM TEST, START/STOP (alarm test), ERASE (memory), PRINT

Nellcor Port: Allows temporary connection of Nellcor pulse oximeter sensors for selection of sensor-specific SpO₂ calibration curve. Intended for high-accuracy testing of all Nellcor disposable and re-usable sensors.

Serial / Printer: Mechanical: 5 Pin MiniDIN / Electrical: Bi-directional RS-232. 9600 baud, 8-N-1

Power Supply: Battery: 7.2V NiCad rechargeable. Capacity: 1.4 Ah, Battery life: 40 hours continuous

Standard Accessories: Power Adapter (Region-specific)

Optional Accessories: Printer/PC interface cable (RS-232) to:
DB25 Connector (PN: 7100-196)
DB9 Connector (PN: 7100-248)
External printer - please call for additional information

Dimensions: 5.12 in x 7.75 in x 1.5 in (13 cm x 19.68 cm x 3.8 cm)

Weight: 1.93 lbs (875g)

Environment 15°C to 40°C, 10% to 90% RH, Indoor Use Only, Category II

Sensitest



8000-060 SENSITEST
8000-062 SENSITEST Expansion Box

Fault Conditions Displayed:

OPEN RED LED, INFRARED LED or PHOTODIODE LED or PHOTODIODE SHORT to ground or shield LED SHORT to PHOTODIODE

Nellcor and Ohmeda connectors Standard

Options: Up to 3 sensor connectors can be added to the enclosure (total 5) from:
- Datex, Hewlett Packard, Novamatrix, Spacelabs, Invivo, Datascope, Criticare, Critikon, Sensormetrix, PhysioControl, Simed and Nihon Koden

Easily field upgraded optional expansion box for up to five (5) additional connectors
Power: Less than 5 mA current consumption
9V battery life exceeds 100 hours

Fast and easy for anyone to use to check cable sensors before or after repair, Sensitest avoids use of adapter cables in most applications.

Dimensions: 7 in x 5 in x 2 in (18 cm x 13 cm x 5 cm)

Weight: 0.88 lbs (0.4 kg)



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