



A medical first – noninvasive measurement of carbon monoxide and methemoglobin in the blood

- Masimo SET® pulse oximetry: proven accurate during motion and low perfusion in more than 100 independent clinical studies*
- Masimo Rainbow SET® technology analyzes 7+ wavelengths of light to accurately measure carboxyhemoglobin (SpCO®) and methemoglobin (SpMet™) percent levels in the blood noninvasively and continuously
- Eliminates the risk of misdiagnosing unsuspected CO poisoning as flu or fatigue
- Detects potentially life-threatening acquired methemoglobinemia
- Quick and easy to use - requires no user calibration and does not require patient cooperation or consciousness
- Complete replacement for existing pulse oximeters with continuous monitoring of SpCO®, SpMet™, SpO₂, Pulse Rate, Perfusion Index, and SIQ®
- Rugged and lightweight - ideal for any field or hospital setting

*References available upon request



Rad-57™

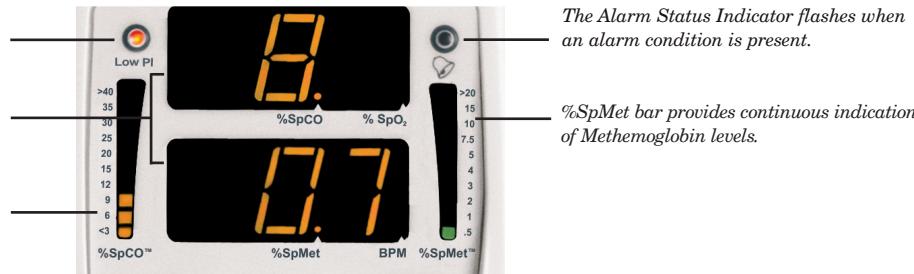
signal extraction pulse CO-Oximeter™

Specifications

The Low PI Indicator illuminates when Perfusion Index is below 0.25.

Pressing the display button enables %SpCO and %SpMet display.

%SpCO bar provides continuous indication of Carboxyhemoglobin levels.



Rad-57 Features

- Revolutionary hardware and software analyzes 7+ wavelengths of light simultaneously to accurately measure Carboxyhemoglobin (SpCO) and Methemoglobin (SpMet) percent levels in the blood within seconds, noninvasively
- Designed for continuous or spot check applications
- User configurable power up default settings
- Four AA alkaline batteries deliver over 8 hours of continuous monitoring of SpCO, SpMet, SpO₂, Pulse Rate and Perfusion Index
- Perfusion Index (PI) indicates arterial pulse signal strength and may be used as a diagnostic tool during low perfusion**
- Low Signal IQ® (SIQ) indicator highlights conditions of low signal quality
- FastSat® tracks rapid changes in arterial O₂ with unmatched fidelity
- SmartTone™ beeps in sync with pulse, even under patient motion conditions
- Up to 72 hours of trending memory of SpCO, SpMet, SpO₂, Pulse Rate and Perfusion Index
- Sensitivity options: APOD, Normal, and MAX
- Protective boot covers and carrying cases available in multiple colors

performance

measurement range

SpO ₂ :	0% - 100%
SpCO:	0% - 99%
SpMet:	0% - 99.9%
Pulse Rate:	25 - 240 (bpm)
Perfusion Index:	0.02% - 20%

SpO₂ saturation accuracy

Saturation:	70% to 100%
No Motion	
Adults, Pediatrics:	±2 digits

Motion¹

Adults, Pediatrics:	±3 digits
Neonate:	±3 digits

Low Perfusion²

Adults, Pediatrics:	±2 digits
Neonate:	±3 digits

SpCO accuracy

SpCO:	1% - 40% ±3 digits ³
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SpMet accuracy

SpMet:	1% - 15% ±1 digits ⁴
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pulse rate accuracy

Pulse Rate:	25 - 240 bpm
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No Motion

Adults, Pediatrics, Neonate:	±3 digits
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Motion

Adults, Pediatrics, Neonate:	±5 digits
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Low Perfusion

Adults, Pediatrics, Neonate:	±3 digits
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resolution

Saturation (%SpO ₂):	1%
Pulse (bpm):	1 bpm

Carboxyhemoglobin (%SpCO)

Numeric Display:	1%
Bar Display:	variable

Methemoglobin (%SpMet)

Numeric Display:	0.1%
Bar Display:	variable

The Alarm Status Indicator flashes when an alarm condition is present.

%SpMet bar provides continuous indication of Methemoglobin levels.

The Rad-57 line includes the Rad-57c which displays SpCO, Rad-57m which displays SpMet and the Rad-57cm which displays both parameters. All models display SpO₂ and Pulse Rate, as well as the Perfusion Index value or an indication of low Perfusion Index.

Rad-57c Rad-57m Rad-57cm

SpMet	●	●
SpCO	●	●
SpO ₂	●	●
PR	●	●
PI	●	●

References:

- ** De Felice et al. The pulse oximeter perfusion index as a predictor for high illness severity in neonate. *Eur J Pediatr* 2002; 161:561-562.
- Continuous rubbing and tapping motions at 2 to 4 Hz at an amplitude of 1 to 2 cm and continuous random frequency motion between 1 to 5 Hz at an amplitude of 2 to 3 cm
- When using new, fully charged batteries
- With FastSat the averaging time is dependent upon the input signal
- Perfusion Index >0.02% and % Transmission >5%
- Accuracy has been validated on healthy adult volunteers against a laboratory co-oximeter
- Automatically enabled in 2 and 4 second averaging modes

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