

# Rad-57™

The world's most versatile handheld oximeter, featuring fully upgradable rainbow® technology



Get Measure-through Motion™ Masimo SET® oxygen saturation, pulse rate, and perfusion index now—and upgrade later to total hemoglobin, oxygen content, carboxyhemoglobin, methemoglobin, and pleth variability index.



# Rad-57™

## TECHNOLOGY OVERVIEW

- > More than 100 independent and objective studies demonstrate Masimo SET® provides the most reliable oxygen saturation (SpO<sub>2</sub>) and pulse rate (PR) measurements under challenging clinical conditions, including patient motion and low peripheral perfusion.
- > Masimo rainbow® technology analyzes multiple wavelengths of light to measure Masimo SET® measurements, total hemoglobin (SpHb®), carboxyhemoglobin (SpCO®), methemoglobin (SpMet®), and oxygen content (SpOC™).
- > Pleth Variability Index (PVI®) is a breakthrough measurement that may help clinicians noninvasively and continuously assess fluid status of patients.

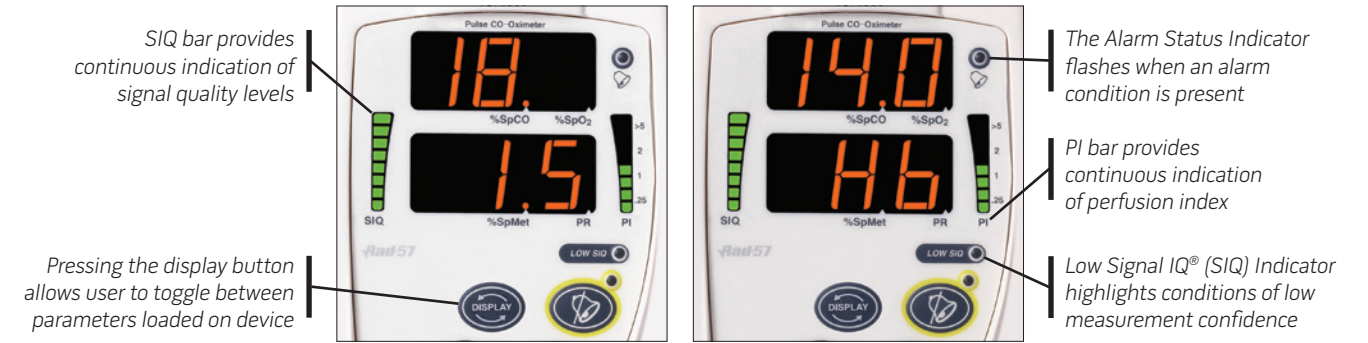
## CLINICAL BENEFITS

- > **Masimo SET® pulse oximetry** - Proven accuracy and reliability allows for better clinical decision-making, leading to improved patient care.
- > **Upgradeable rainbow® Pulse CO-Oximetry** - Noninvasive and quick measurements may allow clinicians to make earlier clinical assessments and reduce costs of care.
- > **Total Hemoglobin (SpHb)** - Helps clinicians with quick, spot-check assessment.
- > **Carboxyhemoglobin (SpCO)** - Helps clinicians detect carbon monoxide (CO) poisoning.
- > **Methemoglobin (SpMet)** - Helps clinicians identify methemoglobinemia, a dangerous and deadly reaction caused by many drugs routinely administered in clinical settings.
- > **Oxygen Content (SpOC)** - By calculating hemoglobin and oxygen saturation, SpOC provides a more complete picture of your patients' oxygenation status.
- > **Pleth Variability Index (PVI®)** - Helps clinicians assess fluid responsiveness in mechanically ventilated patients, aiding fluid management.



*Pictured is the Rad-57 displaying SpCO. Display features will vary based on the noninvasive measurements loaded onto the device.*

## SCREEN DISPLAYS



**The Masimo Rad-57's easy-to-read screen provides at-a-glance patient status data.**

## PRODUCT OVERVIEW

- > Quick and easy-to-use— requires no user calibration.
- > Complete replacement for existing handheld pulse oximeters.
- > Factory-ordered options or simple field installed software upgrades to continuous monitoring and spot-check measurements of SpHb, SpCO, SpMet, SpOC, and PVI.
- > Rugged and lightweight— ideal for field or hospital settings.
- > X-Cal provides an automatic method to detect when cables and sensors have been used beyond their expected life and guards patients against poor quality and performance of imitation sensors and cables.

## HIGHLIGHTS

- > Delivers about 8 hours of continuous battery life, with new batteries.
- > Up to 72 hours of trending memory.
- > FastSat® tracks rapid changes in arterial O<sub>2</sub>.
- > SmartTone™ beeps in sync with pulse, even under patient motion conditions.
- > Sensitivity options of APOD®, Normal, and MAX™ provide flexibility to support a range of clinical applications.

## NONINVASIVE AND QUICK MEASUREMENTS AT THE PUSH OF A BUTTON

Place Sensor on Finger



Press Display Button



Obtain Results



## REUSABLE SENSOR OPTIONS



- > **Rad-57** Comes standard with arterial Oxygen Saturation (SpO<sub>2</sub>), Pulse Rate, and Perfusion Index | PN9216

- > rainbow® reusable sensors available in 3 ft., 8 ft., and 12 ft. cable lengths.
- > Red® reusable sensors available in 3 ft. and 12 ft. cable lengths.
- > Masimo Rad-57 can also be used with Masimo LNOP®, LNCS®, and M-LNCS™ adhesive sensors.
- > rainbow® sensors must be used when reading SpHb, SpCO, and SpMet. Red sensors can be used for SpO<sub>2</sub>, PR, PI, PVI only.

Available Upgrades	PN
Hemoglobin (SpHb) and Oxygen Content (SpOC)	2630
Carboxyhemoglobin (SpCO)	2296
Methemoglobin (SpMet)	2297
Measure of Fluid Responsiveness (PVI)	2313

## PERFORMANCE

### MEASUREMENT RANGE

SpO <sub>2</sub>	0–100%
SpCO	0–99%
SpHb	0–25 g/dL
SpOC	0–35 mL of O <sub>2</sub> /dL of blood
SpMet	0–99.9%
Pulse Rate	25–240 bpm
Perfusion Index	0.02–20%

### ARTERIAL OXYGEN SATURATION ACCURACY

Saturation	60–80%
No Motion	
Adults, Infants, Pediatrics	±3%
Saturation	70–100%
No Motion	
Adults, Infants, Pediatrics	±2%
Neonate	±3%
Motion	
Adults, Infants, Pediatrics, Neonates	±3%
Low Perfusion	
Adults, Infants, Pediatrics, Neonates	±2%

### TOTAL HEMOGLOBIN SATURATION ACCURACY\* (%SpHb g/dL)

SpHb	8–17 g/dL ±1 g/dL
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### CARBOXYHEMOGLOBIN SATURATION ACCURACY (%SpCO)

SpCO	1–40% ±3%
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### METHEMOGLOBIN SATURATION ACCURACY (%SpMet)

SpMet	1–15% ±1%
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### PULSE RATE ACCURACY

Pulse Rate	25–240 bpm
No Motion	
Adults, Infants, Pediatrics, Neonate	±3 bpm
Motion	
Adults, Infants, Pediatrics, Neonate	±5 bpm
Low Perfusion	
Adults, Infants, Pediatrics, Neonate	±3 bpm

### RESOLUTION

Oxygen Saturation (%SpO <sub>2</sub> )	1%
Pulse Rate (bpm)	1 bpm
Carboxyhemoglobin Saturation (%SpCO)	
Numeric Display	1%
Total Hemoglobin Saturation (%SpHb)	
Numeric Display	0.1 g/dL
Methemoglobin Saturation (%SpMet)	
Numeric Display	0.1%

## SPECIFICATIONS

### BATTERIES

Type	4 AA Alkaline
Capacity	up to 8 hours

### ENVIRONMENTAL

Operating Temperature	0–129°F (-18–54°C)
Storage Temperature	-40–158°F (-40–70°C)
Operating Humidity	15–95%, non-condensing
Operating Altitude	500–1060 mbar pressure, -1,000–18,000 ft (-304–5,486 m)
Effective battery life will be reduced when operating the instrument below 5 degrees Fahrenheit due to alkaline battery technology.	

### DIMENSIONS

Handheld	7" x 3" x 1.5" (15.8 cm x 7.6 cm x 3.6 cm)
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### WEIGHT

Handheld	12 oz (with batteries)
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### TRENDING

Provides 72 hours of trending at 2-second resolution of SpO<sub>2</sub>, SpCO, SpHb, SpMet, Pulse Rate, Perfusion Index, and PVI. Output to PC running Masimo TrendCom™ Utility.

### SpO<sub>2</sub> MODES

Averaging mode	2, 4, 8, 10, 12, 14, or 16 seconds
Sensitivity	APOD, Normal, and Max
FastSat	On / Off

### ALARMS

Audible and visual alarms for high and low saturation and pulse rate (SpO<sub>2</sub>–99%, SpHb 1–24.5 g/dL, SpCO 1–98%, SpMet 1–99.5%, PI 0.03–19%, PVI 1–99%, and pulse rate 30–235 bpm)

### DISPLAY/INDICATORS

Data Display	%SpO <sub>2</sub> , %SpCO, SpHb g/dL, SpOC mL/dL, %SpCO, %SpMet, SIQ bar, PI bar, Pulse Rate, Perfusion Index, PVI, low Signal IQ, alarm status, alarm silenced status, and battery status.
Type	LED

### COMPLIANCE

EMC Compliance	EN60601-1-2, Class B
Equipment Classification	IEC 60601-1-1, IEC 60601-1-2
Degree of Protection	Type BF-Applied part