

MASIMO Rad-57™

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



Get gold-standard Masimo SET® oxygen saturation, pulse rate, and perfusion index now— and upgrade later to total haemoglobin, oxygen content, carboxyhaemoglobin, methaemoglobin, and PVI

Masimo > Rad-57™

> Technology

- > More than 100 independent and objective studies demonstrate Masimo SET provides the most reliable SpO₂ and pulse rate measurements even under the most challenging clinical conditions, including patient motion and low peripheral perfusion.
- > Masimo Rainbow® SET technology analyses multiple wavelengths of light to accurately measure total haemoglobin (SpHb™), oxygen content (SpOC®), carboxyhaemoglobin (SpCO™), methaemoglobin (SpMet®), and PVI® noninvasively and continuously.

> Clinical Benefits

- > **Masimo SET pulse oximetry** - Virtually eliminates false alarms without missing true clinical events.
- > **Upgradeable Rainbow SET Pulse CO-Oximetry** - Compared to traditional invasive measurements, noninvasive and immediate measurements may allow clinicians to provide faster diagnosis, initiate treatment earlier, and improve efficiency.
- > **Total Haemoglobin (SpHb)*** - Detect chronic or acute anaemia, identify haemorrhaging earlier, aid in optimal transfusion management.
- > **Oxygen Content (SpOC)*** - By calculating haemoglobin and oxygen saturation, SpOC provides a more complete picture of your patients' oxygenation status.
- > **Carboxyhaemoglobin (SpCO)** - Detect carbon monoxide (CO) poisoning.
- > **Methaemoglobin (SpMet)** - Identify methaemoglobinaemia, a dangerous and deadly reaction caused by many drugs routinely administered in the hospital.
- > **PVI** - Predict fluid responsiveness, aid fluid management.



Pictured is the Rad-57 in SpO₂ mode. 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 and does not require patient cooperation or consciousness.
- > Complete replacement for existing handheld pulse oximeters, with factory-ordered options or simple field-installed software upgrades to continuous monitoring and spot check measurements of SpHb, SpOC, SpCO, SpMet, and PVI.
- > Rugged and lightweight— ideal for field or hospital settings.
- > Awarded Airworthiness Release Certification by the United States Army.

> Features

- > User may program default power-up settings.
- > Delivers more than 10 hours of continuous battery life.
- > Up to 72 hours of trending memory.
- > FastSat® tracks rapid changes in arterial O₂ with unmatched fidelity.
- > 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.



Protective boots are available in your choice of seven different colours.



> Screen Displays



Adult

Rainbow DCI-dc3 | PN 2201
RED DCI-dc3 | PN 2053



Paediatrics

Rainbow DCIP-dc3 | PN 2069
RED DCIP-dc3 | PN 2256

- > 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® and LNCS® adhesive sensors.
- > Rainbow sensors must be used when reading SpHb, SpCO, and SpMet. Red sensors can be used for SpO₂, PR, and PI only.

- > **Rad-57** Comes standard with Oxygen Saturation (SpO₂), Pulse Rate, and Perfusion Index | PN9216

Available Upgrades	PN
Haemoglobin (SpHb) and Oxygen Content (SpOC)	2630
Carboxyhaemoglobin (SpCO)	2296
Methaemoglobin (SpMet)	2297
Measure of Fluid Responsiveness (PVI)	2313

> PERFORMANCE

MEASUREMENT RANGE

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

ARTERIAL OXYGEN SATURATION ACCURACY

Saturation	.60% to 80%
No Motion	
Adults, Infants, Paediatrics	±3%
Saturation	.70% to 100%
No Motion	
Adults, Infants, Paediatrics	±2%
Neonate	±3%
Motion	
Adults, Infants, Paediatrics, Neonates	±3%
Low Perfusion	
Adults, Infants, Paediatrics, Neonates	±2%

TOTAL HAEMOGLOBIN SATURATION ACCURACY* (%SpHb g/dL)

SpHb	.8 - 17 g/dL ±1 g/dL
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CARBOXYHAEMOGLOBIN SATURATION ACCURACY (%SpCO)

SpCO	.1% - 40% ±3%
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METHAEMOGLOBIN SATURATION ACCURACY (%SpMet)

SpMet	.1% - 15% ±1%
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PULSE RATE ACCURACY

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

RESOLUTION

Oxygen Saturation (%SpO ₂)	.1%
Pulse Rate (bpm)	1 bpm
Carboxyhaemoglobin Saturation (%SpCO)	
Numeric Display	.1%
Total Haemoglobin Saturation (%SpHb)	
Numeric Display	0.1 g/dL
Methaemoglobin Saturation (%SpMet)	
Numeric Display	0.1%

> SPECIFICATIONS

BATTERIES

Type	4 AA Alkaline
Capacity	up to 10 hours

ENVIRONMENTAL

Operating Temperature	0°F to 129°F (-18°C to 54°C)
Storage Temperature	-40°F to 158°F (-40°C to +70°C)
Operating Humidity	5% to 95%, non-condensing
Operating Altitude	.500 mbar to 1060 mbar pressure, -1,000 ft to 18,000 ft (-304m to 5,486m)

Effective battery life will be reduced when operating the instrument below 5 degrees Fahrenheit due to alkaline battery technology.

DIMENSIONS

Handheld	6.2" x 3.0" x 1.4" (15.8 cm x 7.6 cm x 3.6 cm)
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WEIGHT

Handheld	13 oz (.37 kg)
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TRENDING

Provides 72 hours of trending at 2-second resolution of SpO₂, SpCO, SpHb, SpMet, Pulse Rate, Perfusion Index, and PVI. Output to PC running Masimo TrendCom™ Utility.

* SpHb and SpOC measurements are pending FDA clearance

SpO₂ 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 (SpO₂ 1% to 99%, SpHb 1 g/dL - 24.5 g/dL, SpCO 1% - 98%, SpMet 1% to 99.5%, PI 0.03% - 19%, PVI 1% - 99%, and pulse rate 30 - 235 bpm)

DISPLAY/INDICATORS

Data Display	%SpO ₂ , %SpCO, SpHb g/dL, SpOC mL/dL, %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
Degree of Protection	Type BF-Applied part