

# MASIMO Rad-8®

Compact design. Unmatched clinical performance.

- > Featuring Masimo SET® pulse oximetry, proven accurate during motion and low perfusion in more than 100 independent and objective studies
- > The accuracy of Masimo SET pulse oximetry has been shown to reduce false alarms by 95% without missing true clinical events
- > Simple, easy to use interface for quick setup and alarm management with one touch programming
- > Large LED color display is easy to read at a distance
- > Compact, lightweight design is ideal for acute and alternate care settings including long term care facilities, homecare and sleep labs



# Masimo Rad-8

## FEATURES

- > Sleep Mode easily configures system to perform bedside studies
- > 2 second averaging in sleep mode
- > Home Mode allows for safe and accurate monitoring and trending at home
- > RadNet® and RadLink® interface capability for multi-patient remote monitoring
- > Perfusion Index (PI) indicates arterial pulse signal strength and may be used as a diagnostic tool during low perfusion<sup>3</sup>
- > Low Signal IQ® (SIQ) indicator highlights conditions of low signal quality
- > FastSat™ tracks rapid changes in arterial O<sub>2</sub> with high fidelity unlike any other pulse oximeter
- > APOD™ (Adaptive Probe Off Detection) offers the best probe off detection of Masimo's three sensitivity modes - APOD, Normal and MAX sensitivity
- > Adjustable averaging 2 to 16 seconds
- > Nurse call interface
- > Up to 7 hours of internal battery life when fully charged
- > 72 hours of trending memory
- > Available in horizontal and vertical configurations
- > Compatible with Philips Vuelink device interface module

**Signal I.Q.® (SIQ)** bar is a signal quality indicator, most useful during motion and low perfusion situations. The LED rises and falls with the pulse, its height indicating signal quality.



When Signal IQ is low, the display turns red, identifying suspect SpO<sub>2</sub> and Pulse Rate values.



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

**Perfusion Index (PI)** indicates arterial pulse signal strength. PI may be used as a diagnostic tool during low perfusion for the accurate prediction of illness severity.<sup>1</sup> The PI display is green when perfusion index is greater than or equal to 0.5 (left graphic) while the PI display is red when perfusion index is less than 0.5 (right graphic).



**One touch alarm limits access**



**Rad-8 Back Panel:** Serial output to compatible devices and nurse call interface.

## PERFORMANCE & ORDERING INFORMATION:

### PERFORMANCE

#### MEASUREMENT RANGE

SpO <sub>2</sub> .....	1 – 100%
Pulse Rate .....	25 – 240 (bpm)
Perfusion Index.....	0.02% – 20%

#### SATURATION ACCURACY

Saturation .....	60% to 80%
No Motion <sup>2</sup>	
Adults, Infants, Pediatrics.....	±4 digits
Saturation .....	70% to 100%
No Motion	
Adults, Pediatrics.....	±2 digits
Neonate .....	±3 digits
Motion <sup>4</sup>	
Adults, Pediatrics.....	±3 digits
Neonate .....	±3 digits
Low Perfusion <sup>5</sup>	
Adults, Pediatrics.....	±2 digits
Neonate .....	±3 digits

#### PULSE RATE ACCURACY

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

#### RESOLUTION

Saturation (%SpO <sub>2</sub> ).....	1%
Pulse Rate (bpm) .....	1 bpm

#### ELECTRICAL

AC Power requirements .....	100-240 VAC, 47-63 Hz
Power consumption.....	.20 VA Max

### BATTERIES

Handheld	
Type .....	Sealed lead acid
Capacity .....	up to 7 hours <sup>6</sup>
Charging time .....	.8 hours

### ENVIRONMENTAL

Operating Temperature .....	41°F to 104°F (5°C to 40°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 -1000 ft to 18,000 ft (-304 m to 5,486 m)

### PHYSICAL CHARACTERISTICS

DIMENSIONS .....	8.2" x 6.0" x 3.0" (20.8 cm x 15.2 cm x 7.6 cm)
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WEIGHT.....	2.1 lbs=.908 kg=32oz
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### MODES

Averaging mode <sup>7</sup> .....	2, 4, 8, 10, 12, 14 or 16 seconds
Sensitivity .....	APOD, Normal and Max <sup>8</sup>

### ALARMS

Audible and visual alarms for high and low saturation (1% to 100%), pulse rate (25 - 240 bpm), sensor condition, system failure and low battery	
Alarm volume .....	High: 85dB (min) - Low: 45dB (min)

### DISPLAY/INDICATORS

Data display.....	% SpO <sub>2</sub> , alarm status, alarm silenced status, AC power, Signal IQ/pleth bar, perfusion index bar, battery status, no sensor, sensor off
Type .....	LED

### COMPLIANCE

Safety Standard for Medical Equipment .....	IEC 60601-1 2 <sup>nd</sup> Edition UL 60601-1 CAN/CSA C22.2 No. 601-1 JIS 0601-1
Type of Protection . . . . .	Class 1 (AC power) Internally powered (battery power)
Degree of Protection-Patient Cable .....	Type BF, Defib Proof-Applied Part
Rad-8 Mode of Operation.....	Continuous
EMC Standard .....	EN60601-1-2, Class B

<sup>1</sup> Hay WW, Rodden DJ, Collins SM, Melera DL, Hale KA, Fashaw LM, Reliability of conventional and new oximetry in neonatal patients. *Journal of Perinatology*, 2002; 22:360-366. | <sup>2</sup> The arterial oxygen saturation accuracy during no motion only applies to LNOP® Blue SpO<sub>2</sub> adhesive sensors | <sup>3</sup> De Felice et al. The pulse oximeter perfusion index as a predictor for high illness severity in neonates. *Eur J Pediatr* 2002; 161:561-562. | <sup>4</sup> 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 4 Hz at an amplitude of 2 to 3 cm. | <sup>5</sup> Pulse Amplitude >0.02% and % Transmission > 5%. | <sup>6</sup> When using a new, fully charged battery. | <sup>7</sup> With FastSat the averaging time is dependent on the input signal. For the 2 and 4 second settings the averaging time may range from 2-4 and 4-6 seconds, respectively. | <sup>8</sup> Maximum Sensitivity mode disables APOD, but maximizes measuring ability.