



Technical Specifications

General

Dimensions:

- Without Printer: 8.9" x 10.4" x 7.0" (22.6 cm x 26.4 cm x 17.8 cm)
- With Printer: 8.9" x 10.4" x 7.9" (22.6 cm x 26.4 cm x 20.1 cm)

Weight:

- Without Printer: 8.5 lbs (3.9 kg) incl. battery
- With Printer: 9.9 lbs (4.5 kg) incl. battery

Environmental

Enclosure Protection: IEC 60529

- Solid Foreign Object: IP5X
- Water: IEC 60529, IPX5

Operating Temperature:

- 0 to 122°F (0 to 50°C)
- -4°F to 140°F (-20°C to 60°C) for 1 hour after the device has been resting at room temperature

Operating Relative Humidity: 15 to 95% RH (non-condensing)

Operating Altitude: - 557 ft to 15,000 ft (-170m to 4,572 m)

Transport/Storage Temperature:

- -22°F to 158°F (-30°C to 70°C) for 1 hour after the device has been resting at room temperature

Note: The device may not perform to specifications when stored at the upper or lower extreme limits of storage temperature and immediately put in use

Airworthy/Safe-to-fly: Certified by US Air Force ATL and US Army USAARL for compliance with Joint enroute care equipment test standards (JECETS):

- US Army ACM for rotary wing aircraft
- US Air Force Safe-to-fly (StF) for fixed wing aircraft

Vibration:

- MIL STD 810G, Method 516-6, 26 drops
 - EN ISO 9919 (per IEC 60068-2-64)
 - RTCA/DO-160G (multiple helicopter frequencies)
 - EN 1789 for ambulance # (multiple helicopter frequencies)
- Shock:** IEC 60068-2-27, 100g, 6 ms half sine
- Bump:** IEC 60068-2-29

Drop:

- MIL STD 810G, Method 516-6, 26 drops at 3 ft (1m)
- EN 1789, 30-inch (76 cm) functional drop
- IEC 60601-1, tested at 6 ft (2m)

Monitor/Display

Display 4 or 12 waveforms and all critical parameters on one screen

Size: 6.5" (16.56 cm) diagonal

Input: 3-lead, 5-lead, or 12-lead patient cable

Type: Colour LCD, 640 x 480 pixels, 800 MCD

Night vision mode (NVG)

Sweep Speed: 25 mm/sec or 50 mm/sec (user selectable)

Lead Selections: I, II, III, AVR, AVL, AVF, V1-6

Frequency Response:

- 0.67 to 20 Hz Limited response
- 0.67 to 40 Hz Monitoring response
- 0.525 to 40Hz Filtered Diagnostic response
- 0.525 to 150Hz Diagnostic response

Patient Modes

User Selectable: Adult, Paediatric, Neonate

Automatically sets configurable defaults for alarm limits, and NIBP settings

Memory Capacity

A combination of 24 hours of trends at 1-minute intervals, 1000 time-stamped events, and 32 snapshots, including monitor and treatment snapshots

Trends (on-screen)

Tabular numeric format. All parameters trended/viewable

Trend Intervals: 1, 5, 10, 15, 30, 60 minutes (Tabular)

ECG

Cable Detection: Automatic 3-, 5-, 12-lead ECG

Cable Compatibility: Propaq Encore, Propaq CS

Input: 3-lead cable, 5-lead cable, 12-lead cable

Leads: I, II, III, AVR, AVL, AVF, V1 – V6

Heart Rate Range: 30 – 300 bpm

Heart Rate Accuracy: ± 3 bpm or 3%, whichever is greater

Pacer Detection and Display

Electrosurgery interference suppression

ESU and defibrillation protected

ECG Sizes: 0.125, 0.25, 0.5, 1, 2, 4 cm/mV, and auto-ranging

Sweep Speed: 25 mm/sec, 50 mm/sec

Common Mode Rejection: Complies with AAMI EC13-2002 section 4.2.9.20

Impedance Pneumography

Displayed Data: Numeric breath rate, Impedance waveform

Breath Rate Range: Adult, Pediatric:

2 to 150 breaths/minute. Neonates: 3 to 150 breaths/minute

Breath Rate Accuracy: 2% or ± 2 , whichever is greater

Displayed Breath Rate: Average of last 10 breath-to-breath rates

User Selectable Leads: Lead I (RA – LA), Lead II (RA – LL)

Sweep Speed: 3.13, 6.25, 12.5 mm/sec

Alarm Settings: High, low, and no breath rate alarm

Non-Invasive Blood Pressure (NIBP)

SmartCuf® and Sure BP® NIBP technology

Measurement Intervals: Automatic 1-, 2-, 3-, 5-, 10-, 15-, 30-, 60-minute, and manual

quick-action NIBP Start/Stop button

TurboCuf: 5 min of repeated NIBP readings

Display: Systolic, diastolic, mean. Viewable on-screen with large numerics

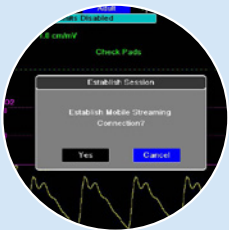
Propaq M

A robust and versatile transport monitor you can trust to work reliably in any environment

- Integration into the BATDOK™ (Battlefield Assisted Trauma Distributed Observation Kit) point-of-injury software tool
- Large display, capable of showing four or twelve waveforms and all clinical parameters on one screen
- First airworthy/safe-to-fly critical care transport monitor to offer multiple display modes to operate in bright sunlight or during night missions (NVG-friendly display)
- Backward-compatible with most existing accessories for all earlier models of Propaq monitors
- Available with optional integrated printer



Telemedicine capabilities enable continuous transmission of patient vital signs and waveforms to remote locations



Robust communications options: Integrated Wi-Fi, Bluetooth® with USB cellular modem and Ethernet capabilities

TBI Dashboard™ providing clinical decision support for managing TBI patients



Continuously updated data provide trending information of all relevant vital signs (SBP, SpO₂, EtCO₂) at a glance. The breath-by-breath countdown timer helps to maintain proper ventilation rates.

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Cuff Overpressure Protection

Typical Measurement Time:

- 30 – 45 sec (on deflation)
- 15 – 30 sec – Sure BP (on inflation)

Standard Cuff Sizes: Adult Mode: adult, large adult, small adult, child, thigh

Pediatric Mode: Child, small child, small adult, infant, newborn

Neonate Mode: Neonate #1 to #5 – disposable, newborn #6, infant #7 – reusable

Default Cuff Inflation Pressure:

- Adults: 160 mmHg
- Pediatrics: 120 mmHg
- Neonates: 90 mmHg

Pressure Measurement Range:

- Systolic: 20 – 260 mmHg
- Diastolic: 10 – 220 mmHg
- Mean: 13 – 230 mmHg

Maximum Cuff Inflation Pressure:

- Adults: 270 mmHg
- Pediatrics: 170 mmHg
- Neonates: 130 mmHg

Masimo® SET SpO₂

Saturation Range: 0 – 100%

Saturation Accuracy: Oxygen Saturation (% SpO₂) - **During No-Motion Conditions**

60 - 80 ± 3%, Adults/Pediatrics/Infants

70 - 100 ± 2%, Adults/ Pediatrics/Infants; ± 3%, Neonates Oxygen Saturation (% SpO₂)

- **During Motion Conditions** 70% - 100% ± 3% Adults/ Pediatrics/Infants/Neonates

Oxygen Saturation (% SpO₂) - **During Low Perfusion Conditions** 70 - 100 ± 2%, Adults/Pediatrics/Infants/Neonates

Pulse Rate Range: Pulse Rate (bpm) 25-240 bpm **During No-Motion Conditions**

25 - 240 ± 3 bpm Adults/Pediatrics/Infants/ Neonates

During Motion Conditions 25 - 240 ± 5 bpm Adults/ Pediatrics/Infants/Neonates

Pulse Rate (bpm) - During Low Perfusion Conditions 25 - 240 ± 3 bpm Adults/Pediatrics/Infants/ Neonates

SpO₂ Average time setting: 4, 8 (default), 16 seconds

Masimo rainbow® SET SpCO₂

Range: 0 – 99%

Accuracy: 1 – 40% ± 3 digits

Masimo rainbow® SET SpMet®

Range: 0 – 99%

Accuracy: 1 – 15% ± 1 digits

Masimo rainbow® SET SpHb®

Measurement Range: 0 – 25 g/dl

Accuracy (Adults/Infants/Pediatrics): 8 – 17 g/dl +/- 1 g/dl

Resolution (SpHb g/dl): 0.1 g/dl

Masimo rainbow® SET SpOC™

Measurement Range: 0 – 35 ml of O₂/dl of blood

Resolution: 0.1 ml/dl

Masimo Perfusion Index (PI)

Measurement Range: 0.02 – 20%

Resolution: 0.1%

Masimo Pleth Variability Index (PVI®)

Measurement Range: 0 – 100%

Resolution: 1%

Microstream® EtCO₂

Range: 0 – 150 mmHg

Accuracy: 0 – 38: ± 2 mmHg

39 – 150: ± 5% + .08% mmHg >38

Respiration Range: 0 – 149 breaths per minute

Respiration Rate Accuracy: 0 – 70 bpm ± 1 bpm

71 – 120 bpm ± 2 bpm

121 – 149 bpm ± 3 bpm

Flow rate: 50 ml/min -7.5 + 15 ml/min

Typical Response Time: 2.9 seconds

Maximum Response Time: 3.9 seconds

TBI Dashboard

Provides graphical trends for SpO₂, Systolic BP, EtCO₂, and a configurable Breath-by-Breath Countdown Timer

Systolic BP: Over the last 15 minutes and updates whenever a new reading is taken.

EtCO₂: data over the last 3 minutes and updates every second

SpO₂: data over the last 3 minutes and updates the data every second

Temperature

Two YSI 400/700 series-compatible channels

Range: 0 – 50°C (32 – 122°F)

Units: °C or °F

Display: T1, T2, and Delta temp

Accuracy: ± 0.1°C from 10 – 50°C ± 0.2°C from 0 – 10°C

Invasive Pressure

Three Channels

Pressure Range: -30 – 300 mmHg

Pulse Rate Measurement Range: 25 – 250 bpm

Formats: S/D, S/D (M), (M) user selectable

User-Selectable Labels: P1, P2, P3, ABP, AO, ART, CVP, BAP, FAP, LAP, PAP, RAP, UAP, UVP, ICP

Transducer Requirements: 5M µV/V/mmHg

Zero Adjustment: ± 200 mmHg

Numeric Pressure Accuracy: ± 2 mmHg or 2% reading, whichever is greater of reading, plus transducer error

Transducer Connector: Standard 6-pin MS connector

Printer (optional)

Type: High-resolution thermal array

Annotation: Time, date, ECG lead, ECG gain, heart rate and treatment summary events

Paper Width: 80 mm

Paper Speed: 25 mm/sec, 50 mm/sec

Delay: 6 seconds

Frequency Response: Automatically set to monitor's frequency response

Record Modes: Manual and automatic (user configurable)

Print Option: Single waveform or a combination up to 3, on alarm, snapshots, treatment summary report, and trend summary

Communication Options

Wireless Output

WiFi 802.11 a/b/g/n

Bluetooth

USB port

Ethernet port

Power

Battery Type: Rechargeable lithium-ion, 11.1 V DC, 6.6 Ah, 73 Wh

Size: 178 mm x 93 mm x 30 mm

Weight: 1.4 lbs

Battery Indicators: 5 battery capacity LED indicators, fault indicator, recalibration indicator

Recharge Rate: 4 hours to 100%

Operating Time: With a new, fully charged battery operating at room temperature:

- 7.5 hours of continuous monitoring ECG, SpO₂, EtCO₂, IP 3x, Temp 2x and NIBP every 15 min; Display Brightness set to 30%

AC Power Adapter: 100 – 240 V AC 50, 60 Hz, 2A 100 – 115 V AC 400Hz, 2A

Telemedicine Capabilities

- Remote view functionality for uninterrupted live streaming of patient vital sign data and waveforms over WiFi and Cellular

- Compatible with USAFRL (US Air Force Research Lab) BATDOK™ point of injury software application. Transmits vital signs data wirelessly from the Propaq M to the BATDOK device where all data is automatically added

- Fully integrated into the US Army's Medical Hands-free Unified Broadcast (MEDHUB) system as a primary sensor

Specifications subject to change without notice. TBI Dashboard functionality not available in the United States, pending FDA approval.

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