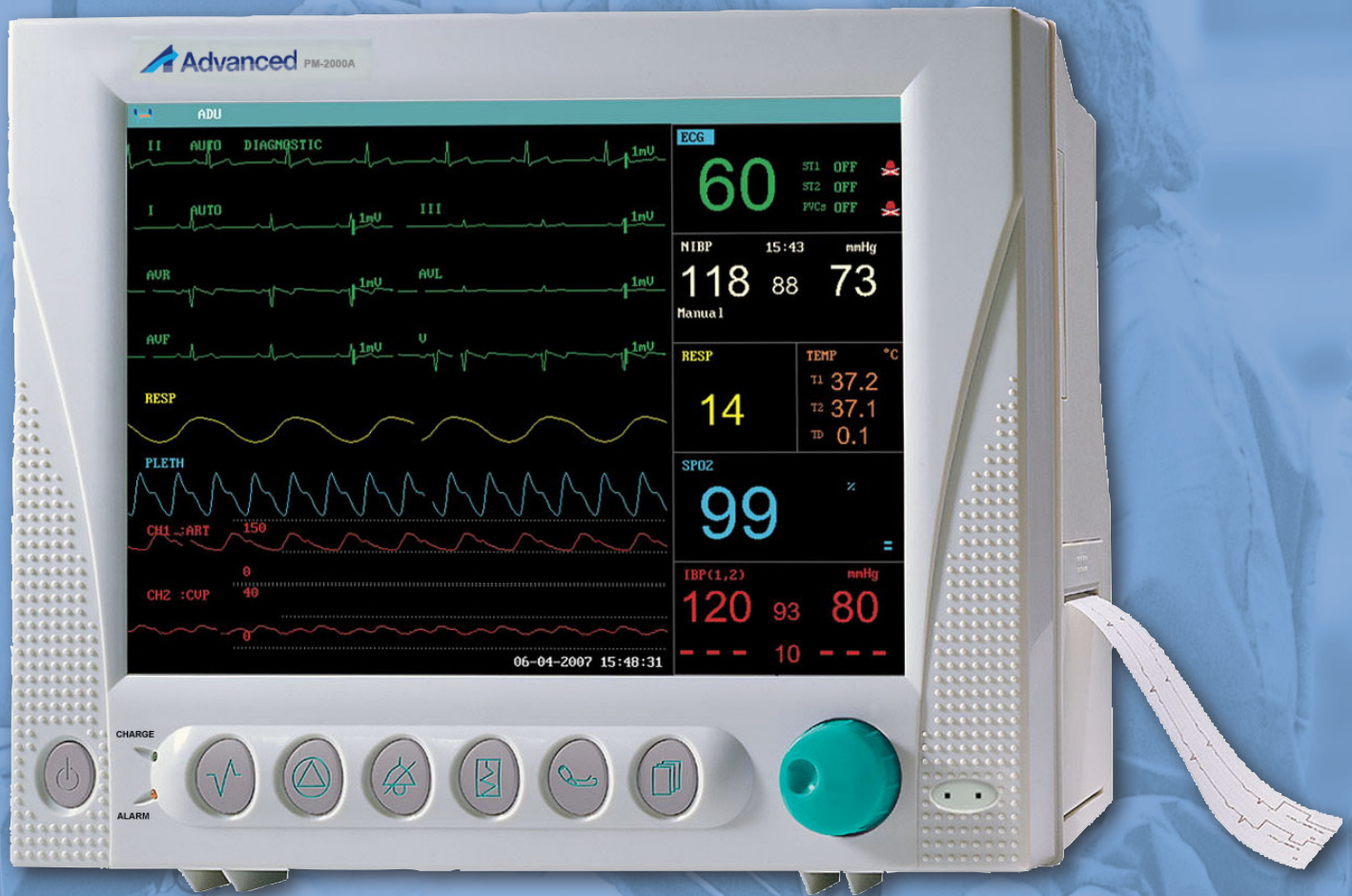


patient MONITOR

PM-2000A



patient MONITOR

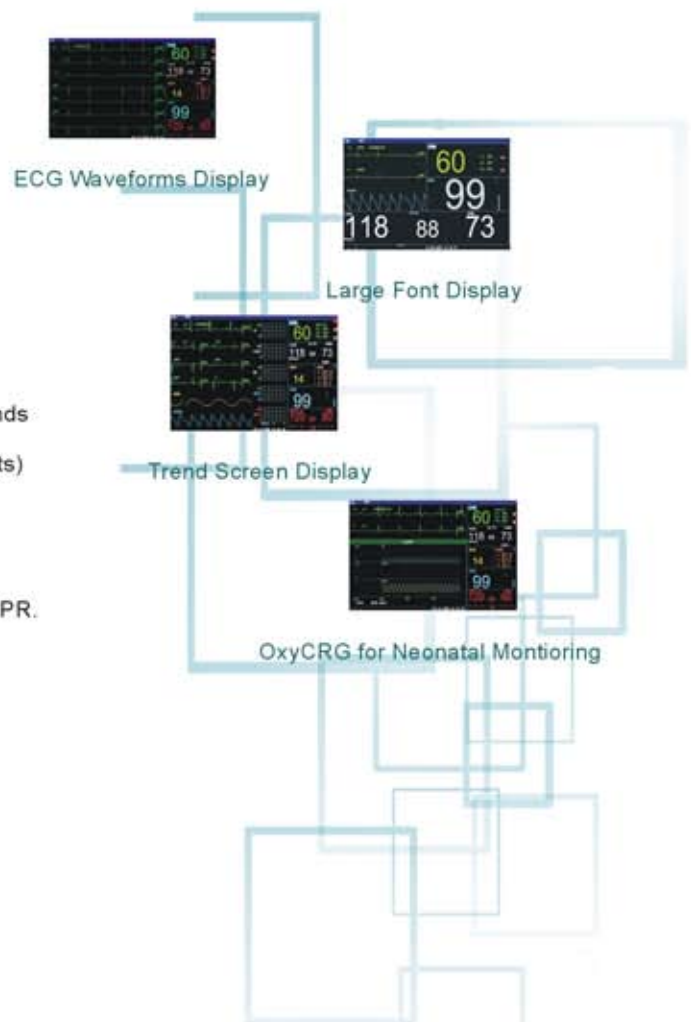
PM-2000A Patient Monitor



- 10.1" color TFT display
- 720 seconds full-disclosure waveforms review
- Advanced sidestream CO₂
- SpO₂ pulse-tone modulation (Pitch Tone)
- OxyCRG for neonatal monitoring
- 7-lead ECG waveforms display simultaneously
- Pacemaker detection
- Arrhythmia analysis, ST segment analysis
- Built-in rechargeable Li-ion battery
- Three channels printing
- Waveform color adjustable
- Bi-directional communications with central monitoring system
- Powerful data storage capacity (96 hours graphic and tabular trends of all parameters, 500 NIBP measurement results, 60 alarm events)
- Nurse call

Standard parameters: 3/5-lead ECG, SpO₂, RESP, NIBP, 2-TEMP, PR.

Optional: Co₂, 2-IBP, Thermal Recorder.



PM-2000A

Patient Monitor



Safety Standards

CE Marking in accordance to Council Directive 2007/17/EC concerning Medical Devices
IEC 60601-1+A1+A2; IEC 60601-1-2+A1;

Physical Specification

Device dimension: 320 mm (L) x 150 mm (W) x 265 mm (H)
Weight: Standard Configuration 3.8 kg (with battery)

Display

Color TFT LCD 10.1"
Resolution: 800 X 480 dpi
Traces Displayed: up to 6
Waveforms Displayed: up to 9
Sweep Speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s

Environment requirement

Ambient Temperature: -20°C - 55°C (-4 - 131° F)
Humidity: 15%-95% non-condensing

Power Supply

External Power Supply
100-240V AC, 50/60Hz
Internal Battery Power Supply
Type: Rechargeable Li-ion
14.8 V DC 2100 mAh
4200 mAh (optional)

Battery working period:
up to 6 hours
Recharging time
< 150 minutes (2100mAh)
< 360 minutes (4200mAh)

Respiration

Method: Trans-thoracic impedance
Operation mode: Auto/Manual
RR Measurement range:
Adult: 0-120 rPM
Neonate/Pediatric: 0-150 rPM
Resolution: 1rPM
Apnea alarm threshold:
10s, 15s, 20s (default), 25s, 30s, 35s, 40s
Alarm: audible and visual alarm,
alarm events recallable
Band width: 0.2-2.5Hz (-3dB)
Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s

ECG

Lead type: 5-lead and 3-lead optional
3 leadwire cable: RA: LA; LL or R; L; F
5 leadwire cable: RA: LA; RL; LL; V or R; L; N; F; C
Lead selection: 3-lead: I, II, III; 5-lead: I, II, III; aVR; aVL; aVF; V
Gain selection: x0.125; x0.25; x0.5; x1; x2; x4; auto
Sweep speed: 6.25mm/s, 12.5mm/s, 25mm/s, 50mm/s
ECG HR Range:
Adult: 5-300bpm;

Pediatric / Neonate: 15-350bpm
Resolution & accuracy: ± 1 bpm or $\pm 1\%$, whichever is greater

Filter: Diagnostic mode: 0.05-150Hz
Monitoring mode: 0.5-40 Hz
Surgical mode: 1-20Hz
Protection: Withstand 5000VAC/50Hz voltage in isolation against defibrillation and electrosurgical interference

Defibrillation and electrosurgical interference
ST-Segment Detection:
Measurement range: -2.0 mV-2.0 mV
Alarm range: -2.0 mV-2.0 mV
ST-Segment Arrhythmia analysis and categorization: Yes
Arrhythmia: Audible and visual alarm, alarm events recallable
Pace maker detection: Yes, and 5 types abnormal status detectable
IEC 60601-2-25, AAMI EC 11/EC 13
IEC 60601-2-27

NIBP

Method: Automatic Oscillometric
Operation modes: Manual/Automatic/Continuous
Auto measurement time interval: Adjustable
1/2/3/4/5/10/15/30/60/90/120/240/480 Minutes
Measurement unit: mmHg/kPa selectable
Measurement types: Systolic, Diastolic, Mean
Pressure range for Adults: Systolic: 40 - 270 mmHg
Diastolic: 10 - 215 mmHg
Mean: 20 - 235 mmHg
Pressure range for Pediatrics: Systolic: 40 - 200 mmHg
Diastolic: 10 - 150 mmHg
Mean: 20-165 mmHg
Pressure range for Neonates: Systolic: 40 - 135 mmHg
Diastolic: 10 - 100 mmHg
Mean: 20 - 110 mmHg
Leak test and pressure auto calibration: Yes
Over-pressure protection: Dual Safety protection
Resolution: 1mmHg
Accuracy: Max mean error ± 5 mmHg
Max standard deviation ± 8 mmHg
Alarm: Systolic, Diastolic, Mean
PR from NIBP: Measurement 40-240 bpm
Resolution 1 bpm
Accuracy ± 3 bpm or 3% whichever is greater
Leak test and pressure auto calibration: Yes
IEC 60601-2-30

SpO₂

Measurement & Alarm Range: 0 - 100%
Resolution: 1%; Accuracy: $\pm 2\%$ (70-100%, Adult/Pediatric);
 $\pm 3\%$ (70-100%, Neonate)
PR Measurement and Alarm Range: 20 - 300bpm
Resolution: 1 bpm;
Accuracy: 3bpm
Refresh rate: 2s
ISO 9919

CO₂ (Sidestream)

Protection Type: BF
Technology: Infrared Absorption Spectrometry
Range: 0-13% (0-100mmHg)
Accuracy: CO₂ < 5.0%: 2 mmHg
CO₂ > 5.0%: 6% of actual reading
Airway Respiratory Rate Range: 3-150 BPM
Airway Respiratory Rate Accuracy: 1% \pm 1BPM
Measured Parameters:
Real-time CO₂: concentration,
Inhaled CO₂: concentration,
AwRR display

Response Time: About 100ms (with 120ml adult dehydrator and 1.5m sampling line)
Delay: < 3s (with 120ml adult dehydrator and 1.5m sampling line)
Flow control: 50-250ml/min adjustable
Calibration: Automatically triggered by duration and temperature (procedure takes 5-8s)
Airway Leakage: < 0.1%

Temperature (DUAL Channel)

Measurement / Alarm range: 0-50°C (32-122° F)
Probe type: YSI (B Series) and CF-FI
Resolution: 0.1°C
Accuracy: $\pm 0.1^\circ\text{C}$ (without probe)
Channel: Dual-channel. Provide T1; T2; ΔT
IEC 12470-4

IBP (2-Channels, optional)

Measured Pressure:
ART, PA, CVP, RAP, LAP, ICP, P1, P2
Measurement range:
-50 - 300 mmHg; Resolution: 1 mmHg
Accuracy: $\pm 2\%$ or ± 1 mmHg, whichever is greater (without probe)
Sensitivity: 5 $\mu\text{V/mmHg}$; Impedance range: 300-3000 Ω
IEC 60601-2-34

Recorder (optional)

Built-in, direct thermal pixel array recorder
Up to 3 channels printing
1, 2, 3 channels selectable
Print speed: 25mm/s, 50mm/s
Paper width: 50 mm/Record width: 48mm

I/O Interface

RJ-45 Ethernet Port IEEE 802.3
Nurse Call output
WLAN (Optional)
USB port (to be released)
VGA output (to be released)

Distributor:



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