

# PMAM-I

## Patient Monitor

### (5 inch)



### Features

Five parameters: ECG, NIBP, SPO2, PR, TEMP.

Waveform: ECG and SPO2 waveforms.

Touch screen, 5.0-inch color TFT-LCD, simple for operating, quickly and accurately measure the data;

Build-in rechargeable Li-battery, up to 15 hours running time, support AC and DC power;

Adjustable audible and visual alarms, and sensor off alarm;

Long time monitoring and sleeping monitoring;

Easy to carry, suitable for ambulance center, has the stand for fixing;

ETCO2, FiCO2 and RR (respiration rate) are optional.

### Advantage

Storage and review data up to 3888 groups via Trend Graph and Trend List.

USB connects to computer

Bluetooth connects to android software

Big font screen interface is easy to observe;

Back light can be adjusted;

Free advanced software is all standard on free (Bluetooth software; VSDV software for download the storage data; Guardian software for transmitting the real-time data and storage all data and waveform;

Health aids software for Android mobile)

## Specification

### General Specifications

Size: 209mm×104mm×47.5mm

Net Weight: 655g

### Display Specification

Measurement Display: color TFT- LCD/touch screen

Power Supply Indicator: Dual-color LED (red/green)

Charging indicator: A green LED

### Power Supply

Input: 100~240VAC, 50/60Hz, 0.7A

Output: DC 5V, 1.5A

Li-ion rechargeable battery, 3.7V/7200mAH

Operating Time: 15 hours with full battery capacity (Condition: 25℃, NIBP working period is 15 minutes)

Recharge Time: 10 hours.

### Environment

Working temperature: 0℃~45℃

Transport and Storage temperature: -25℃~85℃

Working humidity: 30%~85 %

Transport and Storage humidity: 30%~95 % (no condensation)

### ECG

Input: 5- lead ECG cable, standard AAMI cable connector

Lead Selection: I, II, III, avR, avL, avF, C

Gain Selection: ×1, ×2, ×4, ×8

Sweep Speed: 12.5, 25, and 50 mm/s

Frequency Response: None filter: 0.05~100Hz (-3dB), filter: 0.5~40Hz (-3dB)

Calibration Signal: 1mV square wave

Protection: Against electrosurgical interference and defibrillation

### Heart Rate

Measuring Range: 20 bpm~300 bpm

Renew Time: 1 time per beat

Accuracy: ±1 bpm

Alarm Mode: Audible and visual alarm

### SpO2

Measuring Range: 0%~100%

Resolution: 1 %

Accuracy: ±2 % (90%~99%), ±3 % (70%~89%), unspecified (0%~69%)

## Pulse Rate

Measuring and Alarm Range: 20~300bpm

Resolution: 1bpm

Accuracy:  $\pm 1$ bpm

## NIBP

Method: Oscillometric

Mode: Manual, Auto, STAT

Measuring Interval in AUTO Mode: 1, 2, 3, 5, 10, 15, 20, 30, 45, 60 (min)

Measuring Period in STAT Mode: 5 min

Cuff Pressure Range: 0~300mmHg

Pulse Rate Range: 30~250bpm

Measurement Range: Adult 30~255mmHg, Pediatric 30~160mmHg

Over-pressure Protection: Adult 300mmHg, Pediatric 220mmHg

Pressure Resolution: 1mmHg

The SYSTOLIC and DIASTOLIC values measured using this device shall be equal to those measured by trained medical personnel using cuff and stethoscope. The MEAN value measured using this device is equal to that measured using blood pressure measurement device.

## Temperature

Input: Body surface thermal-sensitive resistor temperature sensor

Measuring Range: 0°C~50°C

Accuracy:  $\pm 0.1$ °C

## Storage and Review

Maximum Data Quantity: 3888 groups

Maximum Trend Time: Continuous 129.6 hours

## EtCO<sub>2</sub> (optional)

Measuring Range: 0~150mmHg

Resolution: 1 mmHg

Accuracy:  $\pm 2$ mmHg@< 5.0% CO<sub>2</sub>

## Respiration Rate (optional)

Measuring Range: 0~120rpm

Resolution: 1rpm

Accuracy:  $\pm 1$ rpm

## Standard Accessories

Color palm patient monitor main unit 1 pc

5-lead ECG cable (include surface TEMP probe) 1 pc

Adult finger SpO<sub>2</sub> sensor 1 pc

Adult NIBP cuff 1 pc



Optional ETCO<sub>2</sub>

NIBP extension tube 1 pc  
USB cable 1 pc  
AC power adapter 1 pc  
The operator's manual 1 pc

## Selectable Accessories

Pediatric NIBP cuff  
Pediatric finger Spo2 sensor  
Neonatal wrap SpO2 sensor  
EtCO2 module(optional) 1 pc  
Drying tube(optional) 2 pcs  
Sampling tube(optional) 1 pc  
Nasal tube(optional) 1 pc  
3-way elbow(optional) 1 pc

# PMM-8000E Patient Monitor

## (8 inch)



### Feature

1. 8-inch, two kinds of configuration for choice: 3 Para, or 6 Para  
3 Para: NIBP, SPO2, PR  
6 Para: ECG, RESP, NIBP, SPO2, 2\_TEMP, PR/HR
2. 13 Type Arrhythmic Analysis, Multi\_Lead ECG Waveforms Display in Phase, Real time S\_T segment analysis, pacemaker detection Drug calculation and titratitable;
3. Efficient resistance to interference of defibrillator and electrosurgical cautery;
4. SPO2 can testing for 0.1% Weak;
5. RA-LL impedance Respiration;
6. Trend Coexist Display;
7. OxyCRG DyNamic View Display;
8. Bed to Bed view Display;
9. Networking capacity and nurse calling system;
10. Options of Central Monitoring System;
11. Built-in rechargeable battery 2200mAh;
12. 8" high resolution color TFT LCD display;
13. Large volume of tabular and graphic trends information storage and easy to recall;
14. Anti-ESU, anti- defibrillator;
15. Capture dynamic waveforms.

### Technical Specification

#### ECG

Lead Mode: 5 Leads (R, L, F, N, C or RA, LA, LL, RL, V)  
Lead selection: I, II, III, avR, avL, avF, V,  
Waveform: 2 ch  
Lead mode: 3 Leads (R, L, F or RA, LA, LL)  
Lead selection: I, II, III,  
Waveform: 1 ch  
Gain: '2.5mm/mV, '5.0mm/mV, '10mm/mV, '20mm/mV, auto

## Heart Rate and Alarm

Range

Adult: 15 ~ 300 bpm

Neo/Ped: 15 ~ 350 bpm

Accuracy:  $\pm 1\%$  or  $\pm 1$ bpm, which great

Resolution: 1 bpm

Sensitivity: > 200 ( $\mu$ V P-P)

Differential Input Impedance: > 5 M $\Omega$

CMRR

-Monitor: > 105 dB

-Operation: > 105 dB

-Diagnosis: > 85 dB

Electrode offset potential:  $\pm 300$ mV

Leakage Current: < 10  $\mu$ A

Baseline Recovery: < 3 S after Defi.

ECG Signal Range:  $\pm 8$  m V (Vp-p)

Bandwidth

-Surgery: 1 ~ 15 Hz

-Monitor: 0.5 ~ 35 Hz

-Diagnostic: 0.05 ~ 100 Hz

Calibration Signal: 1 (mV p-p), Accuracy:  $\pm 5\%$

ST Segment Monitoring Range: Measure and Alarm -2.0 ~ +2.0 mV

ARR Detecting

Type: ASYSTOLE, VFIB/VTAC, COUPLET, BIGEMINY, TRIGEMINY, R ON T, VT>2, PVC, TACHY, BRADY, MISSED BEATS, PNP, PNC

Alarm: Available

Review: Available

## Respiration

Method: Impedance between R-F (RA-LL)

Differential Input Impedance: >2.5 M $\Omega$

Measuring Impedance Range: 0.3~5.0 $\Omega$

Base line Impedance Range: 0 – 2.5 K $\Omega$

Bandwidth: 0.3 ~ 2.5 Hz

Resp. Rate

Measuring and Alarm Range

-Adult: 0 ~ 120 rpm  
-Neo/Ped: 0 ~ 150 rpm  
Resolution: 1 rpm  
Accuracy:  $\pm 2$  rpm  
Apnea Alarm: 10 ~ 40 S

## **NIBP**

Method: Oscillometric  
Mode: Manual, Auto, STAT  
Measuring Interval in AUTO Mode: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 (Min)  
Measuring Period in STAT Mode: 5 Min  
Pulse Rate Range: 40 ~ 240 bpm  
Alarm Type: SYS, DIA, MEAN  
Measuring and alarm range  
  Adult Mode  
    -SYS: 40 ~ 270 mmHg  
    -DIA: 10 ~ 215 mmHg  
    -MEAN: 20 ~ 235 mmHg  
  Pediatric Mode  
    -SYS: 40 ~ 200 mmHg  
    -DIA: 10 ~ 150 mmHg  
    -MEAN: 20 ~ 165 mmHg  
  Neonatal Mode  
    -SYS: 40 ~ 135 mmHg  
    -DIA: 10 ~ 100 mmHg  
    -MEAN: 20 ~ 110 mmHg  
Resolution Pressure: 1mmHg  
Accuracy Pressure Maximum Mean error:  $\pm 5$ mmHg  
Maximum Standard deviation:  $\pm 8$ mmHg  
Overpressure Protection  
  -Adult Mode:  $297 \pm 3$  mmHg  
  -Pediatric Mode:  $240 \pm 3$  mmHg  
  -Neonatal Mode:  $147 \pm 3$  mmHg

## **SpO2**

Measuring Range: 0 ~ 100 %  
Alarm Range: 0 ~ 100 %  
Resolution: 1 %  
Accuracy: 70% ~ 100%  $\pm 2$  %; 0% ~ 69% unspecified  
Actualization interval: about 1 Sec.  
Alarm Delay: 10 Sec.  
Pulse Rate  
Measuring and Alarm Range: 20~300bpm

Resolution: 1bpm

Accuracy:  $\pm 2$ bpm

## **Temperature**

Channel: 2

Measuring and Alarm Range: 0 ~ 50 °C

Resolution: 0.1°C

Accuracy:  $\pm 0.1$ °C

Actualization interval: about 1 Sec.

Average Time Constant: <10 Sec.

## **Standard Packing List**

### **3 Para**

Adult finger SpO2 sensor

Adult NIBP cuff

NIBP extension tube

AC power adaptor

Operation instruction

### **6 Para**

5-lead ECG cable (including RESP)

Adult finger SpO2 sensor

Adult NIBP cuff

NIBP extension tube

TEMP sensor

AC power adaptor

ECG electrodes

Operation instruction

## **Optional Function**

Central Monitoring System



# PMM-8000S Patient Monitor

## (10.1 inch)



### Feature

1. 10.1-inch Six Standard parameters: ECG, RESP, NIBP, SPO2, 2\_TEMP, PR/HR
2. 13 Type Arrhythmic Analysis, Multi\_Lead ECG Waveforms Display in Phase, Real time S\_T segment analysis, pacemaker detection Drug calculation and titratiotable;
3. Efficient resistance to interference of defibrillator and electrosurgical cautery;
4. SPO2 can testing for 0.1% Weak;
5. RA-LL impedance Respiration;
6. Trend Coexist Display;
7. OxyCRG DyNamic View Display;
8. Bed to Bed view Display;
9. Networking capacity and nurse calling system;
10. Options of IBP, EtCO2, Central Monitoring System;
11. Built-in rechargeable battery 4400mAh;
12. 10.1" high resolution color TFT LCD display;
13. Large volume of tabular and graphic trends information storage and easy to recall;
14. Anti-ESU, anti- defibrillator;
15. Capture dynamic waveforms.

### Technical Specification

#### ECG

Lead Mode: 5 Leads (R, L, F, N, C or RA, LA, LL, RL, V)

Lead selection: I, II, III, avR, avL, avF, V,

Waveform: 2 ch

Lead mode: 3 Leads (R, L, F or RA, LA, LL)

Lead selection: I, II, III,  
Waveform: 1 ch  
Gain: '2.5mm/mV, '5.0mm/mV, '10mm/mV, '20mm/mV, auto

## Heart Rate and Alarm

Range

Adult: 15 ~ 300 bpm

Neo/Ped: 15 ~ 350 bpm

Accuracy:  $\pm 1\%$  or  $\pm 1$ bpm, which great

Resolution: 1 bpm

Sensitivity:  $> 200$  ( $\mu$ V P-P)

Differential Input Impedance:  $> 5$  M $\Omega$

CMRR

- Monitor:  $> 105$  dB

- Operation:  $> 105$  dB

- Diagnosis:  $> 85$  dB

Electrode offset potential:  $\pm 300$ mV

Leakage Current:  $< 10$   $\mu$ A

Baseline Recovery:  $< 3$  S after Defi.

ECG Signal Range:  $\pm 8$  mV (Vp-p)

Bandwidth

- Surgery: 1 ~ 15 Hz

- Monitor: 0.5 ~ 35 Hz

- Diagnostic: 0.05 ~ 100 Hz

Calibration Signal: 1 (mV p-p), Accuracy:  $\pm 5\%$

ST Segment Monitoring Range: Measure and Alarm -2.0 ~ +2.0 mV

ARR Detecting

Type: ASYSTOLE, VFIB/VTAC, COUPLET, BIGEMINY, TRIGEMINY, R ON T, VT $>2$ , PVC, TACHY, BRADY, MISSED BEATS, PNP, PNC

Alarm: Available

Review: Available

## Respiration

Method: Impedance between R-F (RA-LL)

Differential Input Impedance:  $> 2.5$  M $\Omega$

Measuring Impedance Range: 0.3~5.0 $\Omega$

Base line Impedance Range: 0 – 2.5 K $\Omega$

Bandwidth: 0.3 ~ 2.5 Hz

Resp. Rate

Measuring and Alarm Range

- Adult: 0 ~ 120 rpm

- Neo/Ped: 0 ~ 150 rpm

Resolution: 1 rpm

Accuracy:  $\pm 2$  rpm

Apnea Alarm: 10 ~ 40 S

## **NIBP**

Method: Oscillometric

Mode: Manual, Auto, STAT

Measuring Interval in AUTO Mode: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 (Min)

Measuring Period in STAT Mode: 5 Min

Pulse Rate Range: 40 ~ 240 bpm

Alarm Type: SYS, DIA, MEAN

Measuring and alarm range

Adult Mode

-SYS: 40 ~ 270 mmHg

-DIA: 10 ~ 215 mmHg

-MEAN: 20 ~ 235 mmHg

Pediatric Mode

-SYS: 40 ~ 200 mmHg

-DIA: 10 ~ 150 mmHg

-MEAN: 20 ~ 165 mmHg

Neonatal Mode

-SYS: 40 ~ 135 mmHg

-DIA: 10 ~ 100 mmHg

-MEAN: 20 ~ 110 mmHg

Resolution Pressure: 1mmHg

Accuracy Pressure Maximum Mean error:  $\pm 5$ mmHg

Maximum Standard deviation:  $\pm 8$ mmHg

Overpressure Protection

-Adult Mode:  $297 \pm 3$  mmHg

-Pediatric Mode:  $240 \pm 3$  mmHg

-Neonatal Mode:  $147 \pm 3$  mmHg

## **SpO2**

Measuring Range: 0 ~ 100 %

Alarm Range: 0 ~ 100 %

Resolution: 1 %

Accuracy: 70% ~ 100%  $\pm 2$  %; 0% ~ 69% unspecified

Actualization interval: about 1 Sec.

Alarm Delay: 10 Sec.

Pulse Rate

Measuring and Alarm Range: 20~300bpm

Resolution: 1bpm

Accuracy:  $\pm 2$ bpm

## **Temperature**

Channel: 2

Measuring and Alarm Range: 0 ~ 50 °C

Resolution: 0.1°C

Accuracy:  $\pm 0.1^{\circ}\text{C}$

Actualization interval: about 1 Sec.

Average Time Constant: <10 Sec.

### **IBP (optional)**

Label: ART, PA, CVP, RAP, LAP, ICP, P1, P2

Measuring and alarm range

-ART: 0 ~ 300 mmHg

-PA: -6 ~ 120 mmHg

-CVP/RAP/LAP/ICP: -10 ~ 40 mmHg

-P1/P2: -10 ~ 300 mmHg

Press Sensor

Sensitivity: 5 uV/V/mmHg

Impedance: 300-3000Ω

Resolution: 1 mmHg

Accuracy:  $\pm 2\%$  or  $\pm 1\text{mmHg}$ , which great

Actualization interval: about 1 Sec

### **Standard Packing List**

5-lead ECG cable (including RESP)

Adult finger SpO2 sensor

Adult NIBP cuff

NIBP extension tube

TEMP sensor

AC power adaptor

ECG electrodes

Operation instruction

### **Optional Function**

IBP, EtCO2, Central Monitoring System

# PMM-9000E Patient Monitor

## (12.1 inch)



### Feature

1. 12.1-inch Six Standard parameters: ECG, RESP, NIBP, SPO2, 2\_TEMP, PR/HR
2. 13 Type Arrhythmic Analysis, Multi\_Lead ECG Waveforms Display in Phase, Real time S\_T segment analysis, pacemaker detection Drug calculation and titratitable;
3. Efficient resistance to interference of defibrillator and electrosurgical cautery;
4. SPO2 can testing for 0.1% Weak;
5. RA-LL impedance Respiration;
6. Trend Coexist Display;
7. OxyCRG DyNamic View Display;
8. Bed to Bed view Display;
9. Networking capacity and nurse calling system;
10. Options of Internal Recorder, IBP, EtCO2, Central Monitoring System, Touch Screen, VGA, Neonate SPO2
11. Built-in rechargeable battery 4400mAh;
12. 12.1" high resolution color TFT LCD display;
13. Large volume of tabular and graphic trends information storage and easy to recall;
14. Anti-ESU, anti- defibrillator;
15. Capture dynamic waveforms.

### Technical Specification

#### ECG

Lead Mode: 5 Leads (R, L, F, N, C or RA, LA, LL, RL, V)  
Lead selection: I, II, III, avR, avL, avF, V,  
Waveform: 2 ch  
Lead mode: 3 Leads (R, L, F or RA, LA, LL)  
Lead selection: I, II, III,  
Waveform: 1 ch  
Gain: '2.5mm/mV, '5.0mm/mV, '10mm/mV, '20mm/mV, auto

## Heart Rate and Alarm

Range

- Adult: 15 ~ 300 bpm
- Neo/Ped: 15 ~ 350 bpm

Accuracy:  $\pm 1\%$  or  $\pm 1$ bpm, which great

Resolution: 1 bpm

Sensitivity: >200 ( $\mu$ V P-P)

Differential Input Impedance: > 5 M $\Omega$

CMRR

- Monitor: > 105 dB
- Operation: > 105 dB
- Diagnosis: > 85 dB

Electrode offset potential:  $\pm 300$ mV

Leakage Current: <10 $\mu$ A

Baseline Recovery: < 3S after Defi.

ECG Signal Range:  $\pm 8$  m V (Vp-p)

Bandwidth

- Surgery: 1 ~ 15 Hz
- Monitor: 0.5 ~ 35 Hz
- Diagnostic: 0.05 ~ 100 Hz

Calibration Signal: 1 (mV p-p), Accuracy:  $\pm 5\%$

ST Segment Monitoring Range: Measure and Alarm -2.0 ~ +2.0 mV

ARR Detecting

Type: ASYSTOLE, VFIB/VTAC, COUPLET, BIGEMINY, TRIGEMINY, R ON T, VT>2, PVC, TACHY, BRADY, MISSED BEATS, PNP, PNC

Alarm: Available

Review: Available

## Respiration

Method: Impedance between R-F (RA-LL)

Differential Input Impedance: >2.5 M $\Omega$

Measuring Impedance Range: 0.3 ~ 5.0 $\Omega$

Base line Impedance Range: 0 ~ 2.5 K $\Omega$

Bandwidth: 0.3 ~ 2.5 Hz

Resp. Rate

Measuring and Alarm Range

-Adult: 0 ~ 120 rpm  
-Neo/Ped: 0 ~ 150 rpm  
Resolution: 1 rpm  
Accuracy:  $\pm 2$  rpm  
Apnea Alarm: 10 ~ 40 S

## **NIBP**

Method: Oscillometric  
Mode: Manual, Auto, STAT  
Measuring Interval in AUTO Mode: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 (Min)  
Measuring Period in STAT Mode: 5 Min  
Pulse Rate Range: 40 ~ 240 bpm  
Alarm Type: SYS, DIA, MEAN  
Measuring and alarm range  
Adult Mode  
-SYS: 40 ~ 270 mmHg  
-DIA: 10 ~ 215 mmHg  
-MEAN: 20 ~ 235 mmHg  
Pediatric Mode  
-SYS: 40 ~ 200 mmHg  
-DIA: 10 ~ 150 mmHg  
-MEAN: 20 ~ 165 mmHg  
Neonatal Mode  
-SYS: 40 ~ 135 mmHg  
-DIA: 10 ~ 100 mmHg  
-MEAN: 20 ~ 110 mmHg  
Resolution Pressure: 1mmHg  
Accuracy Pressure Maximum Mean error:  $\pm 5$ mmHg  
Maximum Standard deviation:  $\pm 8$ mmHg  
Overpressure Protection  
-Adult Mode:  $297 \pm 3$  mmHg  
-Pediatric Mode:  $240 \pm 3$  mmHg  
-Neonatal Mode:  $147 \pm 3$  mmHg

## **SpO2**

Measuring Range: 0 ~ 100 %  
Alarm Range: 0 ~ 100 %  
Resolution: 1 %  
Accuracy: 70% ~ 100%  $\pm 2$  %; 0% ~ 69% unspecified  
Actualization interval: about 1 Sec.  
Alarm Delay: 10 Sec.  
Pulse Rate  
Measuring and Alarm Range: 20~300bpm

Resolution: 1bpm

Accuracy:  $\pm 2$ bpm

## Temperature

Channel: 2

Measuring and Alarm Range: 0 ~ 50°C

Resolution: 0.1°C

Accuracy:  $\pm 0.1$ °C

Actualization interval: about 1 Sec.

Average Time Constant: <10 Sec.

## IBP (optional)

Label: ART, PA, CVP, RAP, LAP, ICP, P1, P2

Measuring and alarm range

-ART: 0 ~ 300 mmHg

-PA: -6 ~ 120 mmHg

-CVP/RAP/LAP/ICP: -10 ~ 40 mmHg

-P1/P2: -10 ~ 300 mmHg

Press Sensor

Sensitivity: 5uV/V/mmHg

Impedance: 300-3000Ω

Resolution: 1 mmHg

Accuracy:  $\pm 2\%$  or  $\pm 1$ mmHg, which great

Actualization interval: about 1 Sec

## Standard Packing List

5-lead ECG cable (including RESP)

Adult finger SpO2 sensor

Adult NIBP cuff

NIBP extension tube

TEMP sensor

AC power adaptor

ECG electrodes

Operation instruction

## Optional Function

Internal Recorder, IBP, EtCO2, Central Monitoring System, Touch Screen, VGA, Neonate SPO2



# PMM-9000S

## Patient Monitor

### (15.6 inch)



#### Feature

1. 15.6-inch Six Standard parameters: ECG, RESP, NIBP, SPO2, 2\_TEMP, PR/HR
2. 13 Type Arrhythmic Analysis, Multi\_Lead ECG Waveforms Display in Phase, Real time S\_T segment analysis, pacemaker detection Drug calculation and titratitable;
3. Efficient resistance to interference of defibrillator and electrosurgical cautery;
4. SPO2 can testing for 0.1% Weak;
5. RA-LL impedance Respiration;
6. Trend Coexist Display;
7. OxyCRG DyNamic View Display;
8. Bed to Bed view Display;
9. Networking capacity and nurse calling system;
10. Options of Internal Recorder, IBP, EtCO2, Central Monitoring System, Neonate SPO2
11. Built-in rechargeable battery 4800mAh;
12. 15.6" high resolution color TFT LCD display;
13. Large volume of tabular and graphic trends information storage and easy to recall;
14. Anti-ESU, anti- defibrillator;
15. Capture dynamic waveforms.

#### Technical Specification

##### ECG

Lead Mode: 5 Leads (R, L, F, N, C or RA, LA, LL, RL, V)

Lead selection: I, II, III, avR, avL, avF, V,

Waveform: 2 ch  
Lead mode: 3 Leads (R, L, F or RA, LA, LL)  
Lead selection: I, II, III,  
Waveform: 1 ch  
Gain: '2.5mm/mV, '5.0mm/mV, '10mm/mV, '20mm/mV, auto

## Heart Rate and Alarm

Range

Adult: 15 ~ 300 bpm

Neo/Ped: 15 ~ 350 bpm

Accuracy:  $\pm 1\%$  or  $\pm 1$ bpm, which great

Resolution: 1 bpm

Sensitivity: > 200 ( $\mu$ V P-P)

Differential Input Impedance: > 5 M $\Omega$

CMRR

-Monitor: > 105 dB

-Operation: > 105 dB

-Diagnosis: > 85 dB

Electrode offset potential:  $\pm 300$ mV

Leakage Current: < 10  $\mu$ A

Baseline Recovery: < 3 S after Defi.

ECG Signal Range:  $\pm 8$  m V (Vp-p)

Bandwidth

-Surgery: 1 ~ 15 Hz

-Monitor: 0.5 ~ 35 Hz

-Diagnostic: 0.05 ~ 100 Hz

Calibration Signal: 1 (mV p-p), Accuracy:  $\pm 5\%$

ST Segment Monitoring Range: Measure and Alarm -2.0 ~ +2.0 mV

ARR Detecting

Type: ASYSTOLE, VFIB/VTAC, COUPLET, BIGEMINY, TRIGEMINY, R ON T, VT>2, PVC, TACHY, BRADY, MISSED BEATS, PNP, PNC

Alarm: Available

Review: Available

## Respiration

Method: Impedance between R-F (RA-LL)

Differential Input Impedance: >2.5 M $\Omega$

Measuring Impedance Range: 0.3~5.0 $\Omega$

Base line Impedance Range: 0 – 2.5 K $\Omega$

Bandwidth: 0.3 ~ 2.5 Hz

Resp. Rate

Measuring and Alarm Range

-Adult: 0 ~ 120 rpm

-Neo/Ped: 0 ~ 150 rpm

Resolution: 1 rpm  
Accuracy:  $\pm 2$  rpm  
Apnea Alarm: 10 ~ 40 S

## **NIBP**

Method: Oscillometric  
Mode: Manual, Auto, STAT  
Measuring Interval in AUTO Mode: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 (Min)  
Measuring Period in STAT Mode: 5 Min  
Pulse Rate Range: 40 ~ 240 bpm  
Alarm Type: SYS, DIA, MEAN  
Measuring and alarm range  
    Adult Mode  
        -SYS: 40 ~ 270 mmHg  
        -DIA: 10 ~ 215 mmHg  
        -MEAN: 20 ~ 235 mmHg  
    Pediatric Mode  
        -SYS: 40 ~ 200 mmHg  
        -DIA: 10 ~ 150 mmHg  
        -MEAN: 20 ~ 165 mmHg  
    Neonatal Mode  
        -SYS: 40 ~ 135 mmHg  
        -DIA: 10 ~ 100 mmHg  
        -MEAN: 20 ~ 110 mmHg  
Resolution Pressure: 1mmHg  
Accuracy Pressure Maximum Mean error:  $\pm 5$ mmHg  
Maximum Standard deviation:  $\pm 8$ mmHg  
Overpressure Protection  
    -Adult Mode:  $297 \pm 3$  mmHg  
    -Pediatric Mode:  $240 \pm 3$  mmHg  
    -Neonatal Mode:  $147 \pm 3$  mmHg

## **SpO2**

Measuring Range: 0 ~ 100 %  
Alarm Range: 0 ~ 100 %  
Resolution: 1 %  
Accuracy: 70% ~ 100%  $\pm 2$  %; 0% ~ 69% unspecified  
Actualization interval: about 1 Sec.  
Alarm Delay: 10 Sec.  
Pulse Rate  
Measuring and Alarm Range: 20~300bpm  
Resolution: 1bpm  
Accuracy:  $\pm 2$ bpm

## Temperature

Channel: 2

Measuring and Alarm Range: 0 ~ 50 °C

Resolution: 0.1°C

Accuracy:  $\pm 0.1^{\circ}\text{C}$

Actualization interval: about 1 Sec.

Average Time Constant: <10 Sec.

## IBP (optional)

Label: ART, PA, CVP, RAP, LAP, ICP, P1, P2

Measuring and alarm range

-ART: 0 ~ 300 mmHg

-PA: -6 ~ 120 mmHg

-CVP/RAP/LAP/ICP: -10 ~ 40 mmHg

-P1/P2: -10 ~ 300 mmHg

Press Sensor

Sensitivity: 5 uV/V/mmHg

Impedance: 300-3000Ω

Resolution: 1 mmHg

Accuracy:  $\pm 2\%$  or  $\pm 1\text{mmHg}$ , which great

Actualization interval: about 1 Sec

## Standard Packing List

5-lead ECG cable (including RESP)

Adult finger SpO2 sensor

Adult NIBP cuff

NIBP extension tube

TEMP sensor

AC power adaptor

ECG electrodes

Operation instruction

## Optional Function

Internal Recorder, IBP, EtCO2, Central Monitoring System, Neonate SPO2

# PMARI-800B+

## Patient Monitor

### (15 inch)



### Feature

16. 15-inch Six Standard parameters: ECG, RESP, NIBP, SPO2, 2\_TEMP, PR/HR
17. 13 Type Arrhythmic Analysis, Multi\_Lead ECG Waveforms Display in Phase, Real time S\_T segment analysis, pacemaker detection Drug calculation and titratiotable;
18. Efficient resistance to interference of defibrillator and electrosurgical cautery;
19. SPO2 can testing for 0.1% Weak;
20. RA-LL impedance Respiration;
21. Trend Coexist Display;
22. OxyCRG DyNamic View Display;
23. Bed to Bed view Display;
24. Networking capacity and nurse calling system;
25. Options of printing, IBP, VGA and EtCO2;
26. UP to 4 hours working capacity of built-in rechargeable battery;
27. 15.1" high resolution color TFT LCD display;
28. Large volume of tabular and graphic trends information storage and easy to recall;
29. Anti-ESU, anti- defibrillator;
30. Capture dynamic waveforms.

## Technical Specification

### ECG

Lead Mode: 5 Leads (R, L, F, N, C or RA, LA, LL, RL, V)

Lead selection: I, II, III, avR, avL, avF, V,

Waveform: 2 ch

Lead mode: 3 Leads (R, L, F or RA, LA, LL)

Lead selection: I, II, III,

Waveform: 1 ch

Gain: '2.5mm/mV, '5.0mm/mV, '10mm/mV, '20mm/mV, auto

### Heart Rate and Alarm

Range

Adult: 15 ~ 300 bpm

Neo/Ped: 15 ~ 350 bpm

Accuracy:  $\pm 1\%$  or  $\pm 1$ bpm, which great

Resolution: 1 bpm

Sensitivity: > 200 ( $\mu$ V P-P)

Differential Input Impedance: > 5 M $\Omega$

CMRR

-Monitor: > 105 dB

-Operation: > 105 dB

-Diagnosis: > 85 dB

Electrode offset potential:  $\pm 300$ mV

Leakage Current: < 10  $\mu$ A

Baseline Recovery: < 3 S after Defi.

ECG Signal Range:  $\pm 8$  m V (Vp-p)

Bandwidth

-Surgery: 1 ~ 15 Hz

-Monitor: 0.5 ~ 35 Hz

-Diagnostic: 0.05 ~ 100 Hz

Calibration Signal: 1 (mV p-p), Accuracy:  $\pm 5\%$

ST Segment Monitoring Range: Measure and Alarm -2.0 ~ +2.0 mV

ARR Detecting

Type: ASYSTOLE, VFIB/VTAC, COUPLET, BIGEMINY, TRIGEMINY, R ON T, VT>2, PVC, TACHY, BRADY, MISSED BEATS, PNP, PNC

Alarm: Available

Review: Available

### Respiration

Method: Impedance between R-F (RA-LL)

Differential Input Impedance: >2.5 M $\Omega$

Measuring Impedance Range: 0.3~5.0 $\Omega$

Base line Impedance Range: 0 – 2.5 K $\Omega$

Bandwidth: 0.3 ~ 2.5 Hz  
Resp. Rate  
Measuring and Alarm Range  
-Adult: 0 ~ 120 rpm  
-Neo/Ped: 0 ~ 150 rpm  
Resolution: 1 rpm  
Accuracy:  $\pm 2$  rpm  
Apnea Alarm: 10 ~ 40 S

## **NIBP**

Method: Oscillometric  
Mode: Manual, Auto, STAT  
Measuring Interval in AUTO Mode: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 (Min)  
Measuring Period in STAT Mode: 5 Min  
Pulse Rate Range: 40 ~ 240 bpm  
Alarm Type: SYS, DIA, MEAN  
Measuring and alarm range  
Adult Mode  
-SYS: 40 ~ 270 mmHg  
-DIA: 10 ~ 215 mmHg  
-MEAN: 20 ~ 235 mmHg  
Pediatric Mode  
-SYS: 40 ~ 200 mmHg  
-DIA: 10 ~ 150 mmHg  
-MEAN: 20 ~ 165 mmHg  
Neonatal Mode  
-SYS: 40 ~ 135 mmHg  
-DIA: 10 ~ 100 mmHg  
-MEAN: 20 ~ 110 mmHg  
Resolution Pressure: 1mmHg  
Accuracy Pressure Maximum Mean error:  $\pm 5$ mmHg  
Maximum Standard deviation:  $\pm 8$ mmHg  
Overpressure Protection  
-Adult Mode:  $297 \pm 3$  mmHg  
-Pediatric Mode:  $240 \pm 3$  mmHg  
-Neonatal Mode:  $147 \pm 3$  mmHg

## **SpO2**

Measuring Range: 0 ~ 100 %  
Alarm Range: 0 ~ 100 %  
Resolution: 1 %  
Accuracy: 70% ~ 100%  $\pm 2$  %; 0% ~ 69% unspecified  
Actualization interval: about 1 Sec.

Alarm Delay: 10 Sec.

Pulse Rate

Measuring and Alarm Range: 20~300bpm

Resolution: 1bpm

Accuracy:  $\pm 2$ bpm

## Temperature

Channel: 2

Measuring and Alarm Range: 0 ~ 50 °C

Resolution: 0.1°C

Accuracy:  $\pm 0.1$ °C

Actualization interval: about 1 Sec.

Average Time Constant: <10 Sec.

## IBP (Optional)

Label: ART, PA, CVP, RAP, LAP, ICP, P1, P2

Measuring and alarm range

-ART: 0 ~ 300 mmHg

-PA: -6 ~ 120 mmHg

-CVP/RAP/LAP/ICP: -10 ~ 40 mmHg

-P1/P2: -10 ~ 300 mmHg

Press Sensor

Sensitivity: 5 uV/V/mmHg

Impedance: 300-3000Ω

Resolution: 1 mmHg

Accuracy:  $\pm 2\%$  or  $\pm 1$ mmHg, which great

Actualization interval: about 1 Sec

## Standard Packing List

5-lead ECG cable (including RESP)

Adult finger SpO2 sensor

Adult NIBP cuff

NIBP extension tube

TEMP sensor

AC power adaptor

ECG electrodes

Operation instruction

## Selectable Accessory

Child finger SPO2 sensor

Child NIBP cuff

Neonate NIBP cuff



# PMARI-800D

## Modular Patient Monitor

### (12.1 inch)



### Introduction

Our modular patient monitor can achieve modularization for function expanding with the help of integration plug-in technology, which can meet the requirement of updating and the monitors in all departments in the hospital. With various function, this machine can satisfy the convenient operation and the selection of all data of monitor in all departments in the hospitals.

### Features

- Integrated Plug in Modular, 12.1" colorful and clear TFT display
- Standard 6 parameters and optional single plug-in parameter box
- Touch screen available; able to be operated by keyboard or optional mouse
- With durable trim knob and backlight silicone buttons
- Simultaneously display at least 10 parameters, 13 kinds of arrhythmia analysis
- ECG Waveforms of 7-lead displayed simultaneously.
- Assist to judge the heart activity directly
- 15 kinds of drug dose calculations
- Anti-electrosurgical, anti-defibrillation, suitable for monitoring critical care

Trend interface, OxyCRG interface, BigFont interface  
Built-in detachable rechargeable lithium battery, battery life 4.5 hours  
1000 hours trend data and trend graphs, 48 hours full waveform reviewing  
Power failure data store  
High capacity of information storage  
NIBP dual overpressure protection  
Wired/wireless connection, with system supporting 3 display screens  
Supporting SD card, 4 USB interfaces  
Omni-directional visible design; 3 levels of audible, visual and audio alarm; dual alarm lights for physiological and technical alarm

## Technical specification

### ECG

Lead Mode: 5 Leads (R, L, F, N, C or RA, LA, LL, RL, V)  
Lead selection: I, II, III, avR, avL, avF, V,  
Waveform: 2 ch  
Lead mode: 3 Leads (R, L, F or RA, LA, LL)  
Lead selection: I, II, III,  
Waveform: 1 ch  
Gain: '2.5mm/mV, '5.0mm/mV, '10mm/mV, '20mm/mV, auto

### Heart Rate

Range  
-Adult: 15 ~ 300 bpm  
-Neo/Ped: 15 ~ 350 bpm  
Accuracy:  $\pm 1\%$  or  $\pm 1$ bpm, which great  
Resolution: 1 bpm  
Sensitivity:  $> 200$  (uV P-P)  
Differential Input Impedance:  $> 5\text{ M}\Omega$   
CMRR  
-Monitor:  $> 105\text{ dB}$   
-Operation:  $> 105\text{ dB}$   
-Diagnosis:  $> 85\text{ dB}$   
Electrode offset potential:  $\pm 300\text{mV}$   
Leakage Current:  $< 10\text{ uA}$   
Baseline Recovery:  $< 3\text{ S}$  after Defi.  
ECG Signal Range:  $\pm 8\text{ mV}$  (Vp-p)  
Bandwidth  
-Surgery:  $1 \sim 15\text{ Hz}$   
-Monitor:  $0.5 \sim 35\text{ Hz}$   
-Diagnostic:  $0.05 \sim 100\text{ Hz}$   
Calibration Signal:  $1\text{ (mV p-p)}$ , Accuracy:  $\pm 5\%$   
ST Segment Monitoring Range: Measure and Alarm  $-2.0 \sim +2.0\text{ mV}$

ARR Detecting

Type: ASYSTOLE, VFIB/VTAC, COUPLET, BIGEMINY, TRIGEMINY, R ON T, VT>2, PVC, TACHY, BRADY, MISSED BEATS, PNP, PNC

Alarm: Available

Review: Available

## Respiration

Method: Impedance between R-F (RA-LL)

Differential Input Impedance: >2.5 MΩ

Measuring Impedance Range: 0.3~5.0Ω

Base line Impedance Range: 0 – 2.5 KΩ

Bandwidth: 0.3 ~ 2.5 Hz

Resp. Rate

Measuring and Alarm Range

-Adult: 0 ~ 120 rpm

-Neo/Ped: 0 ~ 150 rpm

Resolution: 1 rpm

Accuracy: ±2 rpm

Apnea Alarm: 10 ~ 40 S

## NIBP

Method: Oscillometric

Mode: Manual, Auto, STAT

Measuring Interval in AUTO Mode: 1, 2, 3, 4, 5, 10, 15, 30, 60, 90, 120, 180, 240, 480 (Min)

Measuring Period in STAT Mode: 5 Min

Pulse Rate Range: 40 ~ 240 bpm

Alarm Type: SYS, DIA, MEAN

Measuring and alarm range

Adult Mode

-SYS: 40 ~ 270 mmHg

-DIA: 10 ~ 215 mmHg

-MEAN: 20 ~ 235 mmHg

Pediatric Mode

-SYS: 40 ~ 200 mmHg

-DIA: 10 ~ 150 mmHg

-MEAN: 20 ~ 165 mmHg

Neonatal Mode

-SYS: 40 ~ 135 mmHg

-DIA: 10 ~ 100 mmHg

-MEAN: 20 ~ 110 mmHg

Resolution Pressure: 1mmHg

Accuracy Pressure Maximum Mean error: ±5mmHg

Maximum Standard deviation: ±8mmHg

#### Overpressure Protection

- Adult Mode:  $297 \pm 3$  mmHg
- Pediatric Mode:  $240 \pm 3$  mmHg
- Neonatal Mode:  $147 \pm 3$  mmHg

#### SpO2

Measuring Range: 0 ~ 100 %

Alarm Range: 0 ~ 100 %

Resolution: 1 %

Accuracy: 70% ~ 100%  $\pm 2$  %; 0% ~ 69% unspecified

Actualization interval: about 1 Sec.

Alarm Delay: 10 Sec.

#### Pulse Rate

Measuring and Alarm Range: 20~300bpm

Resolution: 1bpm

Accuracy:  $\pm 2$ bpm

#### Temperature

Channel: 2

Measuring and Alarm Range: 0 ~ 50 °C

Resolution: 0.1°C

Accuracy:  $\pm 0.1$ °C

Actualization interval: about 1 Sec.

Average Time Constant: <10 Sec.

#### Configuration

Standard: ECG, RESP, NIBP, SPO2, PR, TEMP

Optional Function: Recorder, 2-IBP, VGA, ETCO2, AG (Anesthesia Gas), CO (Cardiac Output), Touch Screen, WIFI, Central Monitoring System.