

# iPM Series

Patient Monitor Quick Guide



**mindray**

Thank you for purchasing Mindray Patient Monitor.

We have included this convenient Quick Guide to help you with the basic operations. For more details, please refer to the Operator's Manual.

**NOTE:**

- Before attempting to install, operate or adjust this product, please save and read the Quick Guide completely.
- This Quick Guide is based on the maximum configuration and therefore some contents may not apply to your monitor. If you have any question, please contact us.

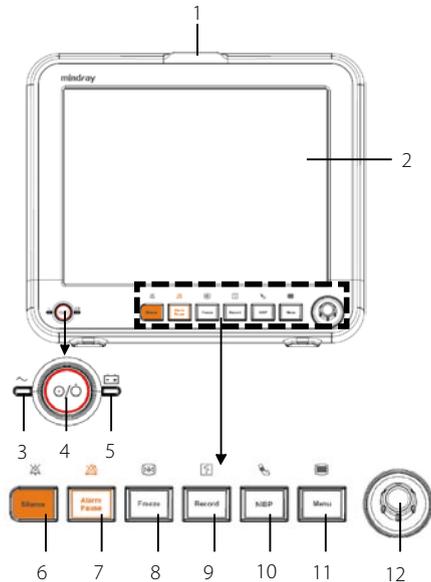
© 2011 Shenzhen Mindray Bio-Medical Electronics Co., Ltd. All rights reserved.

Content in this guide is subject to change without prior notice.

# Product Overview

1

## Front View



- Alarm lamp**

When a physiological alarm or technical alarm occurs, this lamp will flash as defined below.

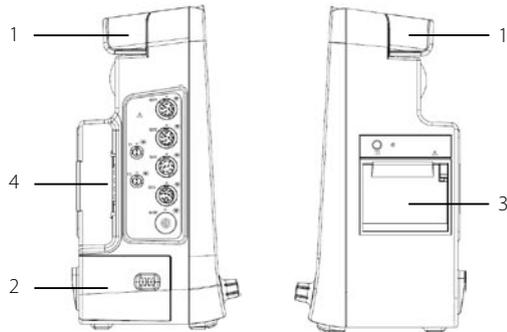
  - High level alarms: the lamp quickly flashes red.
  - Medium level alarms: the lamp slowly flashes yellow.
  - Low level alarms: the lamp lights yellow without flashing.
- Display Screen**
- AC power LED (iPM 12/iPM 10)  
AC/DC power LED (iPM 8)**
- Power On/Off Switch**
  - Pressing this switch turns the patient monitor on.
  - When the monitor is on, pressing and holding this switch turns the monitor off.

An indicator is built in this switch. It turns on when the patient monitor is on and turns off when the patient monitor is off.
- Battery LED**
  - On: when the battery is installed and the AC source is connected.
  - Off: when no battery is installed or the installed battery is malfunction, or no AC source is connected when the patient monitor is power off.
  - Flash: when the patient monitor operates on battery power.
-  **Press to silence all alarm sounds.**
-  **Press to pause or restore alarms.**
-  **Press to freeze or unfreeze waveforms.**
-  **Press to start or stop recordings.**
-  **Press to start or stop NIBP measurements.**
-  **If no menu is displayed on the screen, pressing it will enter the main menu. If there is a menu displayed on the screen, pressing it will close that menu.**
- Knob**

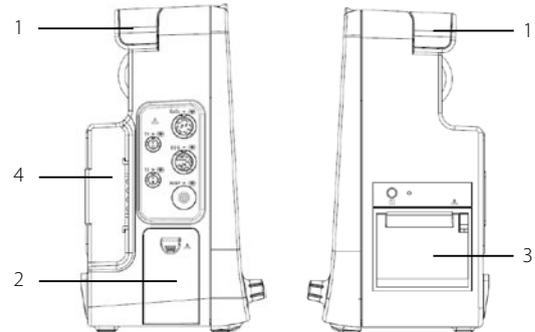
Rotate the Knob clockwise or anti-clockwise. With each click, the highlight jumps to the neighboring item. When you reach your desired item, press the Knob to select it.

## Product Overview

### Side View (iPM 12)

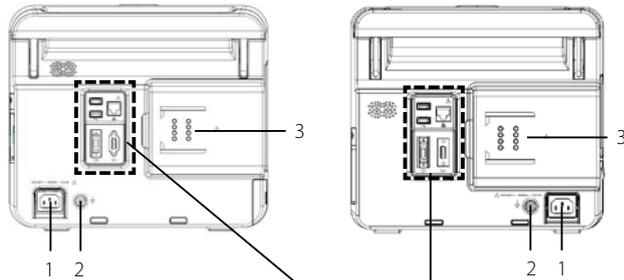


### Side View (iPM 10/iPM 8)

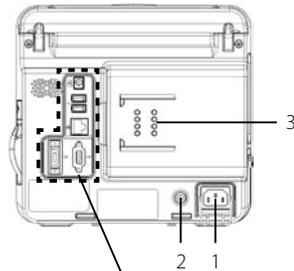


- |                        |                     |
|------------------------|---------------------|
| 1. Handle              | 3. Recorder         |
| 2. Battery compartment | 4. Parameter module |

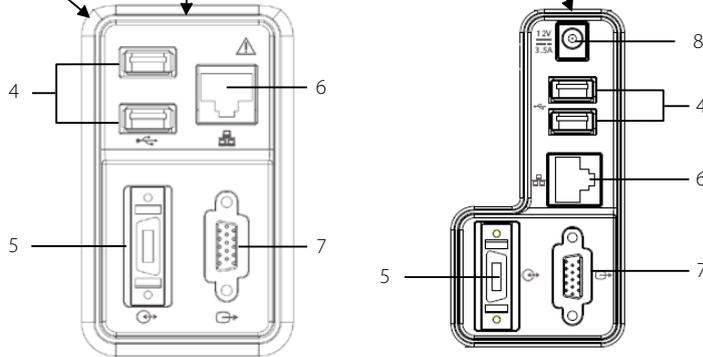
### Rear View (iPM 12/iPM 10)



### Rear View (iPM 8)



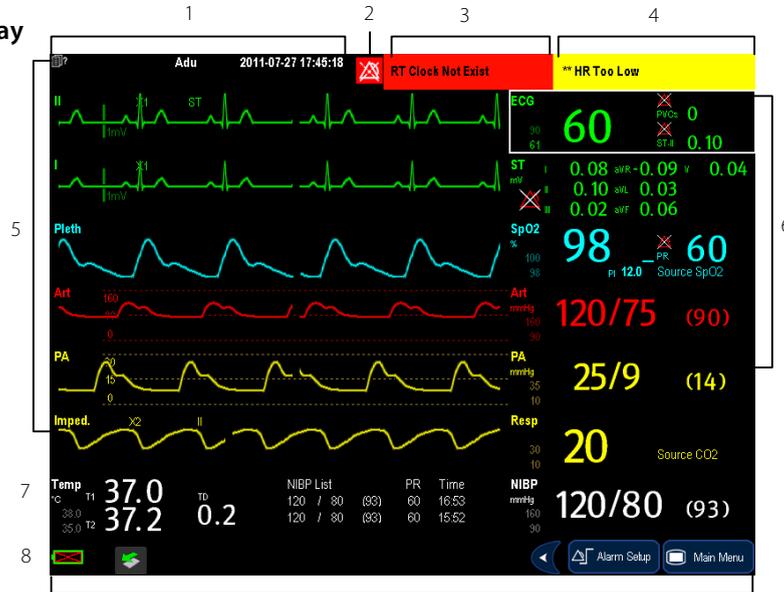
- 1. AC Power Input
- 2. Equipotential Grounding Terminal
- 3. Parameter Module Slot
- 4. USB Connectors
- 5. Multifunctional Connector
- 6. Network Connector
- 7. VGA Connector
- 8. DC Power Input



## Basic Operations

4

### Screen Display



9

- |                             |                             |                        |
|-----------------------------|-----------------------------|------------------------|
| 1. Patient Information Area | 4. Physiological Alarm Area | 7. Parameter Area B    |
| 2. Alarm Symbols            | 5. Waveform Area            | 8. Prompt Message Area |
| 3. Technical Alarm Area     | 6. Parameter Area A         | 9. QuickKeys Area      |

### Getting Started

#### Turning Power on

1. Before you start to make measurements, check the patient monitor and plug-in modules for any mechanical damage and make sure that all external cables, plug-ins and accessories are properly connected.
2. Plug the power cord into the AC power source. If you run the patient monitor on battery power, ensure that the battery is sufficiently charged.
3. Press the power on/off switch on the monitor's front.

#### Starting Monitoring

1. Decide which measurements you want to make.
2. Connect the required modules, patient cables and sensors.
3. Check that the patient cables and sensors are correctly connected.
4. Check that the patient settings such as [Patient Cat.], [Paced], etc. are appropriate for your patient.

Refer to the appropriate measurement section for details of how to perform the measurements you require.

#### Disconnecting from Power

To disconnect the patient monitor from the AC power source, follow this procedure:

1. Confirm that the patient monitoring is finished.
2. Disconnect the patient cables and sensors from the patient monitor.
3. Make sure to save or clear the patient monitoring data as required.
4. Press and hold the power on/off switch. The patient monitor shuts down and you can unplug the power cable.



#### NOTE:

- Make sure that the operating environment of the equipment meets the specific requirements. Otherwise unexpected consequences, e.g. damage to the equipment, could result.
- Do not use the patient monitor for any monitoring procedure on a patient if you suspect it is not working properly, or if it is mechanically damaged. Contact your service personnel or us.

## Using the Touchscreen

Select screen items by pressing them directly on the patient monitor's screen. You can enable or disable touchscreen operation by pressing and holding the **[Main Menu]** QuickKey for 3 seconds.

A padlock symbol  is displayed if touchscreen operation is disabled.

## Calibrating the Touchscreen

1. Select **[Main Menu]**→**[Maintenance >>]**→**[User Maintenance >>]**→enter the required password→**[Cal. Touchscreen]**.
2.  will, in turn, appear at different positions of the screen.
3. Select each  as it appears on the screen.
4. After the calibration is completed, the message **[Screen Calibration Completed!]** is displayed. Select **[Ok]** to confirm the completion of the calibration.

## Changing General Settings

### Setting up a Monitor

In situations where you install a patient monitor or change the patient monitor's application site, you need to setup the patient monitor as follows:

1. Select **[Main Menu]**→**[Maintenance >>]**→**[User Maintenance >>]**→enter the required password.
2. In the **[User Maintenance]** menu, select, in turn, **[Monitor Name]**, **[Department]** and **[Bed No.]**, and then change their settings.

### Changing Language

1. Select **[Main Menu]**→**[Maintenance >>]**→**[User Maintenance >>]**→enter the required password.
2. In the **[User Maintenance]** menu, select **[Language]** and then select the desired language.
3. Restart the patient monitor.

### Adjusting the Screen Brightness

1. Select the **[Main Menu]**→**[Screen Setup >>]**→**[Brightness]**.
2. Select the appropriate setting for the screen brightness. 10 is the brightest, and 1 is the least bright.

If the patient monitor operates on battery power, you can set a less bright screen to prolong the operating time of the battery. When the patient monitor enters standby mode, the screen will change to the least brightness automatically.

### Setting the Date and Time

1. Select **[Main Menu]** → **[Maintenance >>]** → **[System Time >>]**.
2. Set the date and time.
3. Select **[Date Format]** and toggle between **[yyyy-mm-dd]**, **[mm-dd-yyyy]** and **[dd-mm-yyyy]**.
4. Select **[Time Format]** and toggle between **[24h]** and **[12h]**.



#### NOTE:

- Changing date and time will affect the storage of trends and events and may cause data missing.

### Entering the Parameter Setup Menu

You can select the waveform area or parameter area to enter corresponding parameter setup menu.

### Entering the Alarm Setup Menu

1. Select **[Main Menu]** → **[Alarm Setup >>]** to enter the alarm setup menu.

### Adjusting Alarm Volume

1. Select the **[Volume Setup]** QuickKey, or **[Main Menu]** → **[Alarm Setup >>]** → **[Others]**.
2. Select **[Alm Volume]** and then select the appropriate volume: X-10, in which X is the minimum volume, depending on the set minimum alarm volume (refer to the chapter Alarm), and 10 the maximum volume.

### Adjusting Key Volume

1. Select the **[Volume Setup]** QuickKey, or **[Main Menu]** → **[Screen Setup >>]**.
2. Select **[Key Volume]** and then select the appropriate volume. 0 means off, and 10 the maximum volume.

### Adjusting QRS Volume

The QRS tone is derived from either the HR or PR, depending on which is currently selected as the alarm source in **[ECG Setup]** or **[SpO<sub>2</sub> Setup]**. When monitoring SpO<sub>2</sub>, there is a variable pitch tone which changes as the patient's saturation level changes. The pitch of the tone rises as the saturation level increases and falls as the saturation level decreases. The volume of this tone is user adjustable.

1. Select the **[Volume Setup]** QuickKey, or the ECG parameter window → **[Others >>]**, or the SpO<sub>2</sub> parameter window.
2. Select **[QRS Volume]** or **[Beat Vol]** and then select the appropriate volume. 0 means off, and 10 the maximum volume.

## Basic Operations



The monitor provides the following screens:

- Normal Screen, or
- Minitrends Screen, or
- PAWP Screen, or
- View Others Screen, or
- ECG 7-Lead Full-Screen, or
- Big Numerics Screen, or
- OxyCRG Screen, or
- C.O. Screen, or
- ECG 7-Lead Half-Screen, or
- ECG 12-Lead Full-Screen

You can select **[Main Menu]** → **[Screen Layout >>]** → **[Choose Screen]** to choose a desired screen.

### Changing the Screen Layout

You can enter the **[Screen Setup]** window as shown below by selecting **[Main Menu]** → **[Screen Setup]** → **[Screen Layout >>]**. In this window, you can allocate the positions of the parameters and waveforms. The parameters or waveforms whose positions are not allocated will not be displayed.

The ECG parameter and the first ECG waveform always display in the first row. The configurable areas can be classified as Area A, Area B, and Area C.

- In Area A, you can choose to display the parameters (having waveforms) and their waveforms. Each parameter and the associated waveform are displayed in the same row.
- In Area B, you can choose to display the parameters and their waveforms. When there is no parameter displayed in area C, both the parameters and their waveforms will be displayed in area B. Otherwise, only the parameters will be displayed.
- In Area C, you can choose to display all the parameters whose associated waveforms will not be displayed.

The screen can automatically adjust to ensure the best view based on your screen setup.

#### NOTE:

- ❑ The parameters whose positions are not allocated in the **[Screen Setup]** window will not be displayed. However, the monitor can still give alarms of these parameters.

Use only the substances approved by us and methods listed in this chapter to clean or disinfect your equipment. Warranty does not cover damage caused by unapproved substances or methods.

Recommended cleaning agents are:

- Sodium hypochlorite bleach (diluted)
- Hydrogen peroxide (3%)
- Ethanol (70%)
- Isopropanol (70%)

To clean your equipment, follow this procedure:

1. Shut down the patient monitor and disconnect it from the power line.
2. Clean the display screen using a soft, clean cloth dampened with a glass cleaner.
3. Clean the exterior surface of the equipment using a soft cloth dampened with the cleaner.
4. Wipe off all the cleaning solution with a dry cloth after cleaning if necessary.
5. Dry your equipment in a ventilated, cool place.

Shenzhen Mindray Bio-Medical Electronics Co., Ltd.  
Mindray Building, Keji 12th Road South, Hi-tech Industrial Park,  
Nanshan, Shenzhen 518057 P.R. China  
Tel: +86 755 26582888  
Fax: +86 755 26582680

[www.mindray.com](http://www.mindray.com)



Comply with the requirements of the Council Directive 93/42/EEC.



Shanghai International Holding Corp.  
GmbH (Europe)  
Eiffestraße 80, 20537 Hamburg, Germany



046-002387-00(1.0)