

mindray

SAFETY

Safety Checks

- General overview of system integrity, system is visually clean, all required accessories are available and suitable for patient group
- Check integrity of accessories, ensure mains lead is plugged in and that mains power is on

Disabling the touchscreen

- Press and hold the **Main Menu** quick key for approx 3 seconds. A padlock symbol 🔒 displays on the main menu quick key if the touchscreen is disabled
- To re-enable the touchscreen, press and hold the Main Menu quick key again

Cleaning

- Adhere to the **Operators Manual** for advice on cleaning agents
- Follow hospital policy, but with an awareness that agents utilised by the hospital may cause damage to the monitor over time

Please Note: Some items that connect to the system are single patient use

T1

Removing & inserting the T1

- Press the tab located on the underside of the T1 module and remove from the module housing
- Insert the T1 by sliding the module into the housing until a click is heard
- The monitored parameter waveforms appear on the host monitor screen
- Two green LEDs are illuminated on the front of the T1 module

T1 battery

- Up to 5 hours within optimal conditions (powered by a new, fully charged battery at 25°c, ECG, SpO₂, auto NIBP measurements @15 min intervals)
- Battery life reduced to approximately 2 hours when using T1 and transfer CO₂ unit under the conditions stated above

T1 storage

- Ensure the T1 is docked. When the host monitor is connected to AC mains power and in Standby, the T1 will receive a battery charge
- If the host monitor is switched off and connected to AC mains power, only the host monitor receives a battery charge

PATIENT ADMISSION & DISCHARGE

Admitting a patient

- Patient Setup quick key -> Admit patient
- OR
 - Main Menu quick key → Patient Setup → Admit Patient → OK
 - If the Discharge Patient button appears dimmed or is not available, directly select Admit Patient and then select:
 - Yes to apply the data saved in the patient monitor to the new patient

These guidelines do <u>NOT</u> replace the instructions for use and all users should refer to the appropriate **Operator's Manual** for detailed instructions. The Illustrations may not necessarily reflect the setup or data displayed on your device. OR

- No to clear the data saved in the patient monitor
- Enter patient details in the **Patient Demographics** window

Please Note: Ensure the correct Patient Category (ADU, PED or NEO) and Paced status is selected

• Select **Ok** when complete

Accessing & editing patient information

- Select the Patent Information Area on the top left hand corner of the touch screen
- Within the Patient Demographic window, enter patient details \rightarrow OK

Please Note: When docking the T1, if the Patient Demographics in the host monitor are inconsistent with those in the T1, a Select Patient menu will appear

Choose from:

- Continue Patient in Monitor
- Continue Patient in T1
- New Patient

Discharging a patient

- Patient Setup quick key → Discharge Patient → Standby → Ok
- OR
 - Main Menu quick key → Patient Setup → Discharge Patient → Standby → OK
 - Discharging a patient clears all history data in the monitor

SpO₂

Selection and application of the SpO₂ Sensor

- Different sensors are available for finger and earlobe placement, and as reusable / single patient use
- Sensor selection should depend on the weight range of the patient (see sensor packaging)
- The finger sensor should be fitted with the finger diagram uppermost
- Incorrect sensor placement can result in less than optimum measurements

Perfusion Index (PI)

- This is the numerical value for the pulsatile portion of the measured signal caused by arterial pulsation
- Pl is an indicator of pulsatile strength, and is also used to assess the quality of an SpO₂ measurement
 - Above 1 is optimal
 - Between 0.3 and 1 is acceptable (displays with a yellow background)
 - Below 0.3 indicates low perfusion (displays with a red background)
 Reposition the SpO₂ sensor or find a better sensor location. If low perfusion persists, choose another method of measuring oxygen saturation if possible

Low PI value



- This example displays a low PI of 0.2 indicating that the pulse is weak
- The PI value highlighted in RED offers a visual indicator of the PI status
- A '?' is displayed, as a further visual indication that the measurement may be unreliable

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Selection and application of the NIBP Cuff

- Select an appropriately sized cuff by referring to the limb circumference marked on the cuff
- Apply the cuff to the patient's upper arm or leg, ensuring the **()** marking on the cuff matches the artery location
- The cuff should fit snuggly, but with enough room for two fingers to be placed between the cuff and the patient's limb (on adults) and loosely on neonates with little or no air present within the cuff
- Do not use NIBP cuff on limb with an Intravenous Infusion or arterial catheter in place
- The middle of the NIBP cuff should be in line with the right atrium of the heart
- An incorrect cuff size may give inaccurate readings

Starting & stopping NIBP measurements

• Start and stop NIBP measurement by selecting one of the options below:

Task	By Quick Key	From NIBP menu
Start a manual measurement	NIBP Start/Stop quick key 🍋	Start NIBP button
Start auto NIBP series	NIBP Start/Stop quick key 👟	Setup tab → set Interval → Start NIBP button
	NIBP Measure quick key 着	
Start sequence NIBP measurement	NIBP Measure quick key not sequence →	Sequence tab → set NIBP sequence →Start NIBP button
Start STAT measurement	NIBP STAT quick key	STAT button
	NIBP Measure quick key → STAT	
Stop the current NIBP measurements	NIBP Start/Stop quick key	Stop NIBP button
End auto NIBP series	Stop All quick key 🧌	Stop All button
Stop STAT measurement and end series	NIBP Start/Stop quick key 🍋	Stop NIBP or Stop All button
	NIBP STAT quick key	

IBP

Changing invasive blood pressure labels

 Select the IBP numeric area or waveform area to enter the corresponding pressure menu → Set IBP1 or IBP2 Label

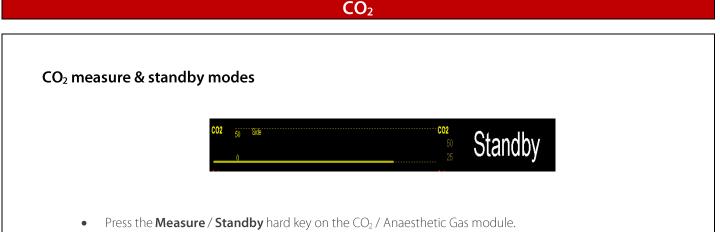
Please Note: The pressure label is a unique identifier for each type of pressure, therefore, you should select a proper pressure label for the source of the pressure you want to monitor

Zeroing pressures

Zero the transducer by one of the following methods:

- Press the **Zero** hard key on the module
- Select the numeric area (such as the Art numeric area), and then select Zero option
- Select the **IBP Zero** quick key

Please Note: After the zero calibration is completed, close the three-way valve to the air and open to the patient Ensure that the valve cap is reconnected as the final operation

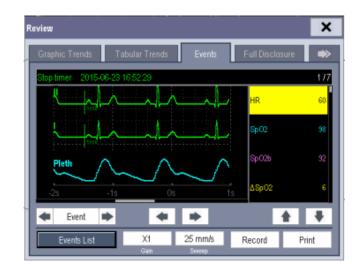


• Select the CO₂ numeric area or waveform area to enter the CO₂ / AG menu → Setup → Set Operating Mode to Measure / Standby

REVIEWING PATIENT DATA

Triggering & reviewing a manual event

- You can initiate a manual event by selecting the Manual Event quick key
- OR
- Main Menu quick key \rightarrow Mark Event \rightarrow Select the waves to be saved \rightarrow Trigger Manual event
- Manually triggered events can be viewed via the **Review** quick key \rightarrow **Events**
- Select the event to be viewed \rightarrow **Details**



- The monitor stores events in real time, including technical alarm events, physiological alarm events, manual events and operational events
- When an event occurs, up to 16 seconds of data prior to, and following the event, are stored
- You can select **I** to navigate through the waveforms

Displaying tabular trends & changing the viewable data interval

- Review quick key -> Tabular Trends
- Select Interval option at the bottom of the Tabular Trends review window

ALARMS

Setting alarm limits

- Alarm Setup quick key
- OR
- Main Menu quick key -> Alarm Setup
- OR
- Individual alarm settings can also be accessed from each parameter menu

Then select desired buttons to set alarm properties

Alarm Reset



- The alarm sound is silenced
- A \sqrt{a} appears before the alarm message, indicating that the alarm is acknowledged
- The Alarm Reset symbol appears in the alarm symbol area and the parameter numeric and alarm limits flash

Alarm Pause



Depending on system setup

• Alarm Pause quick key will temporarily disable all alarm indicators for a pre-set length of time

When alarms are paused, the following rules occur:

- No alarm lamps flash, no alarms are sounded, no numeric and alarm limits flash, and no messages are displayed
- The remaining alarm pause time is displayed in the physiological alarm information area
- The alarm pause symbol is displayed in the system information area

GENERAL OPERATION

Loading configurations

Changes can be made to some settings during operation. However, these changes or the pre-selected configuration may not be appropriate for the newly admitted patient. Therefore, the monitor allows you to load a specific configuration

To load a configuration, follow this procedure:

T1

• Main Menu quick key \rightarrow Load Configuration \rightarrow Select the desired configuration \rightarrow Load \rightarrow Yes

Host Monitor

- Load Config quick key → Select the desired configuration → Load → Yes
- OR
- Main Menu quick key → Load Configuration → Select the desired configuration → Load → Yes

Night Mode

This is a clinical monitoring mode which allows you to avoid disturbing the patient by enabling the user to preset specific volume and screen brightness levels

• Night Mode quick key \rightarrow Adjust settings as required \rightarrow Enter Night Mode

OR

• Main Menu quick key → Screen Setup → Night Mode → Adjust settings as required → Enter Night Mode

To cancel night mode

- Exit Night Mode quick key → Ok
- Main Menu quick key \rightarrow Screen Setup \rightarrow Night Mode \rightarrow Ok

Standby Mode

Temporarily stops patient monitoring without shutting down the monitor by entering standby mode

• Standby quick key → Yes

In standby mode, the monitor behaves as follows:

- All parameter measurements are suspended
- All alarm and prompt messages are suspended, except for the battery low alarm
- Screen brightness is reduced

To exit standby mode, choose one of the following:

- Press any key
- OR
- Press the touchscreen to exit the standby mode and resume monitoring the current patient