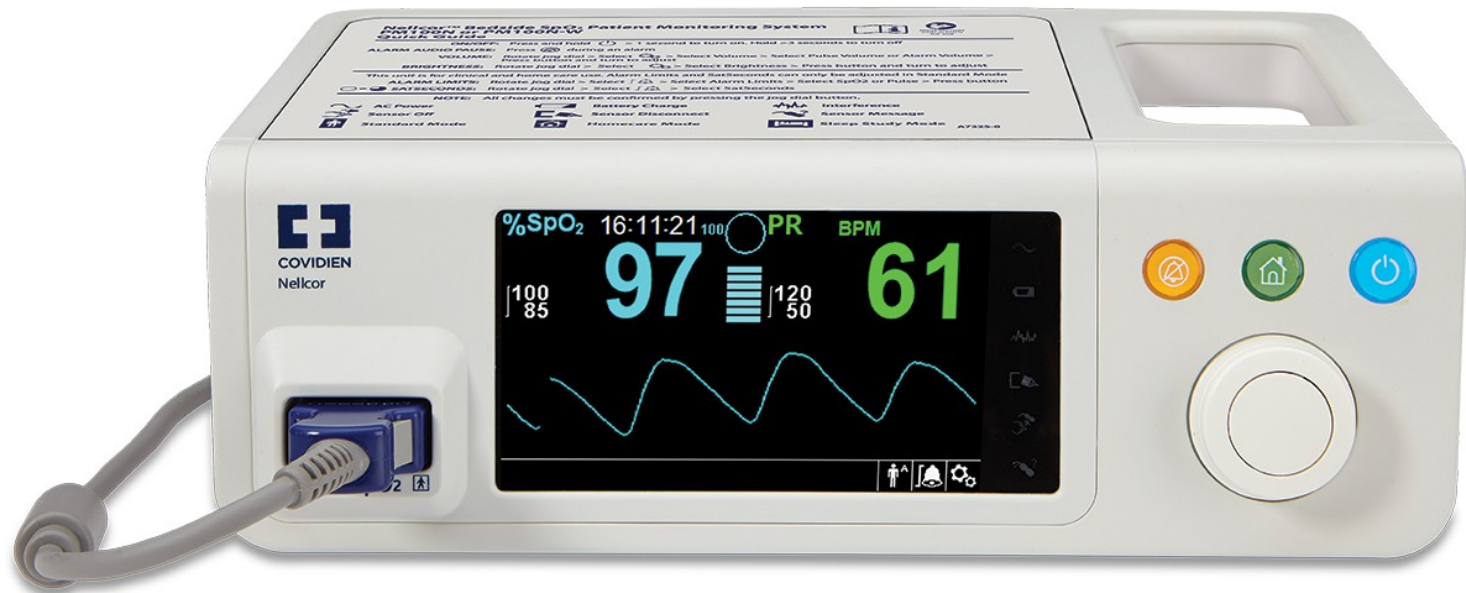**COVIDIEN**

positive results for life™

Nellcor™ Bedside SpO$_2$ Patient Monitoring System, PM100N
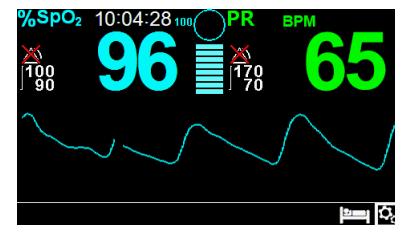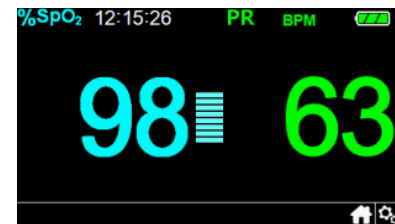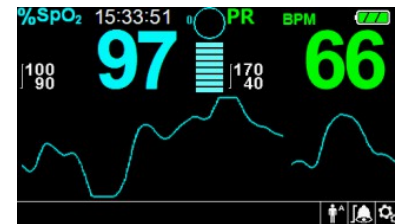
In-Service Presentation

The Nellcor™ Bedside SpO2 Patient Monitoring System, PM100N, is intended for prescription use only for continuous monitoring of functional arterial oxygen saturation and pulse rate of adult, pediatric and neonatal patients, who are well or poorly perfused, during motion and no motion conditions. It is intended to be used in hospital, hospital type facilities, and intra-hospital transport as well as in the homecare environments.

New Homecare and Sleep Study Modes

Nellcor™ Bedside SpO2 Patient Monitoring System, PM100N
is the only bedside monitor with standard, homecare, and sleep study modes.

- **Standard Mode:** Advanced functionality to monitor in-hospital patients with SpO2, pulse rate, and SatSeconds alarm management.

- **Homecare Mode:** Password protected, simplified monitoring for non-hospital settings. Prevents lay users from modifying alarm settings.

- **Sleep Study Mode:** Password protected, simplified monitoring for sleep studies. Reduces screen backlighting and eliminates alarms to reduce disturbances to sleeping patients.
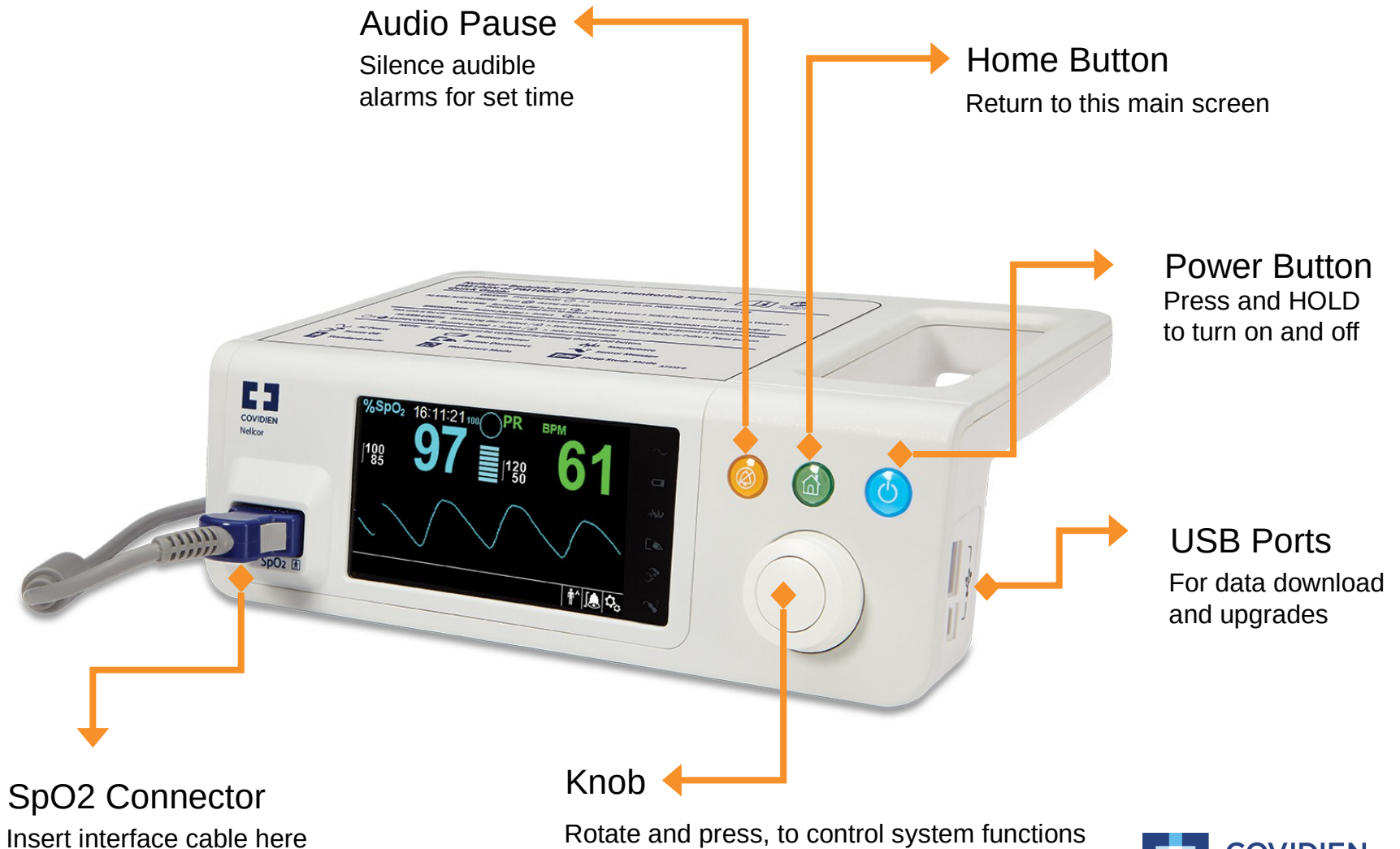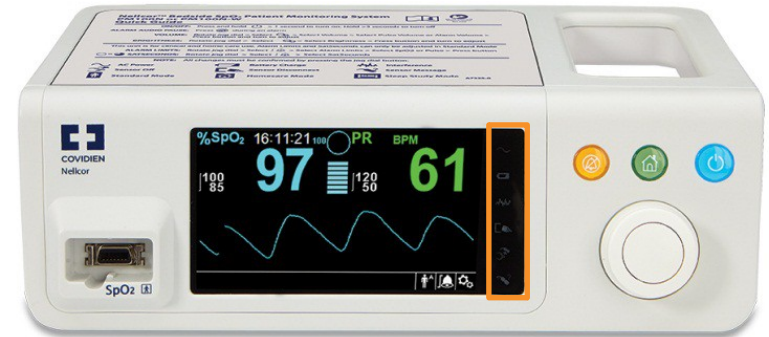
Rear Panel

1. Nurse Call Port

2. AC Power Connector

3. Battery Cover

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Front & Side Panel

Audio Pause
Silence audible alarms for set time

Home Button
Return to this main screen

Power Button
Press and HOLD to turn on and off

USB Ports
For data download and upgrades

SpO2 Connector
Insert interface cable here

Knob
Rotate and press, to control system functions

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Display – Right Side

AC Power Indicator

Battery Charge Indicator

Interference Indicator
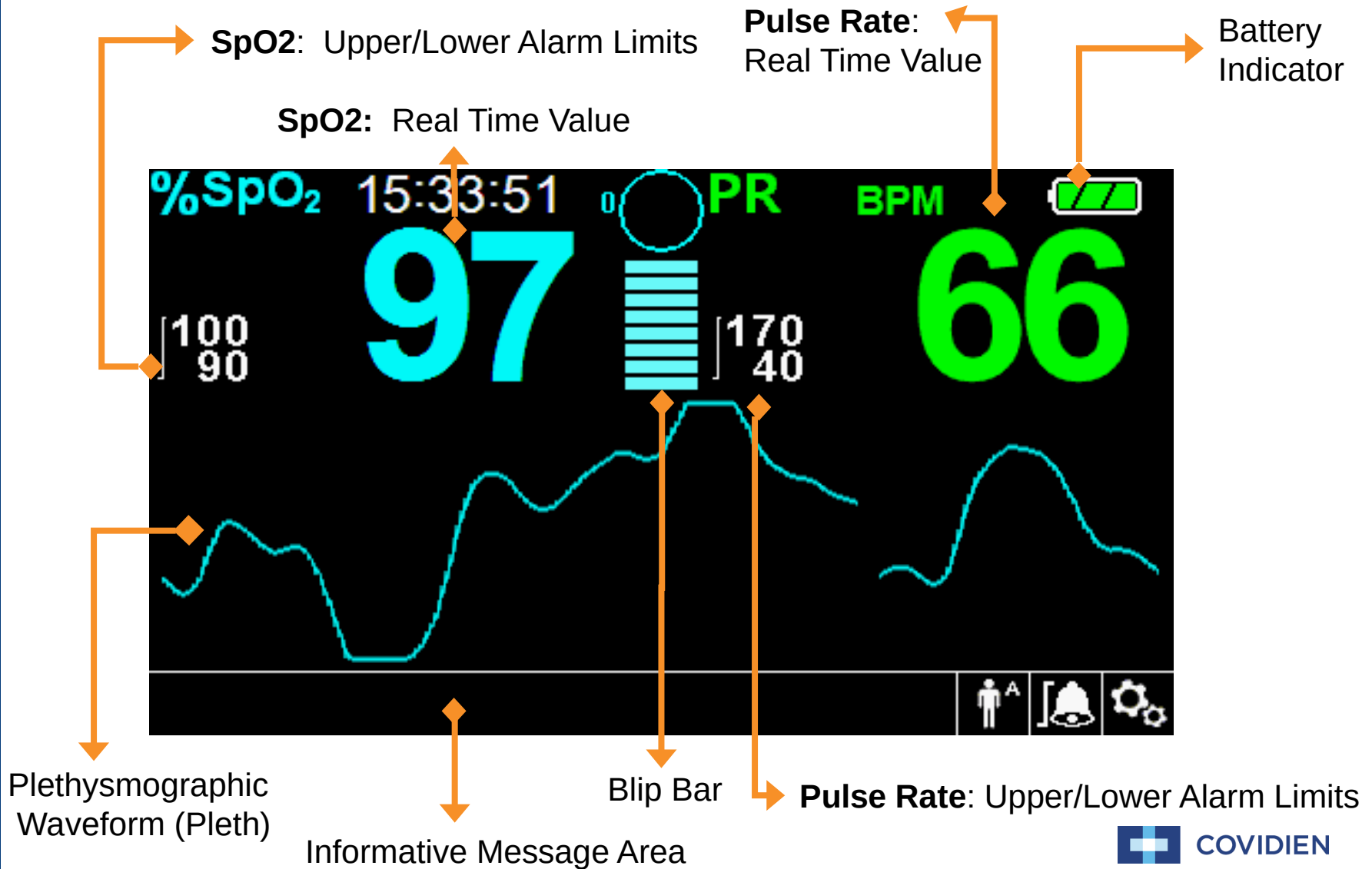
Sensor Disconnect Indicator

Sensor Off Indicator

Sensor Message Indicator

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Hands on Review

- Attach Power Cord to device and plug into AC receptacle
- Power on device and determine when it is ready for use
- Connect cable and sensor to device
- Create the various sensor indicator messages
  - Interference indicator
  - Sensor disconnect indicator
  - Sensor off indicator
  - Sensor message indicator (articulate when this occurs)

- Power off the device

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Standard Monitoring Display – Main View

SpO2: Upper/Lower Alarm Limits

SpO2: Real Time Value

Pulse Rate: Real Time Value

Battery Indicator

Plethysmographic Waveform (Pleth)

Informative Message Area
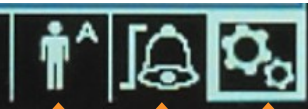
Blip Bar

Pulse Rate: Upper/Lower Alarm Limits

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Standard Monitoring Display – Bottom

Informative Message Area

SpO₂ Cable/Sensor Disconnect.

Patient Mode

Alarm Limits Menu

Options Menu

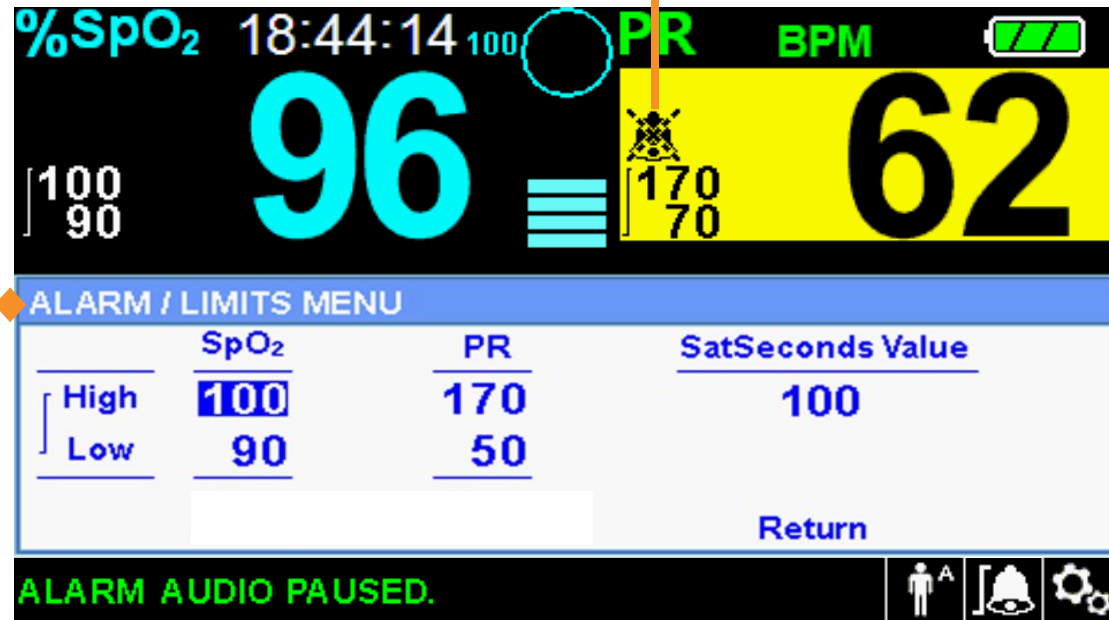Covidien Respiratory & Monitoring Solutions | 4/10/15 |

Standard Monitoring Alarm Limits Menu

To access the Alarm Limits Menu, rotate the knob to highlight the alarm limits display area and press.
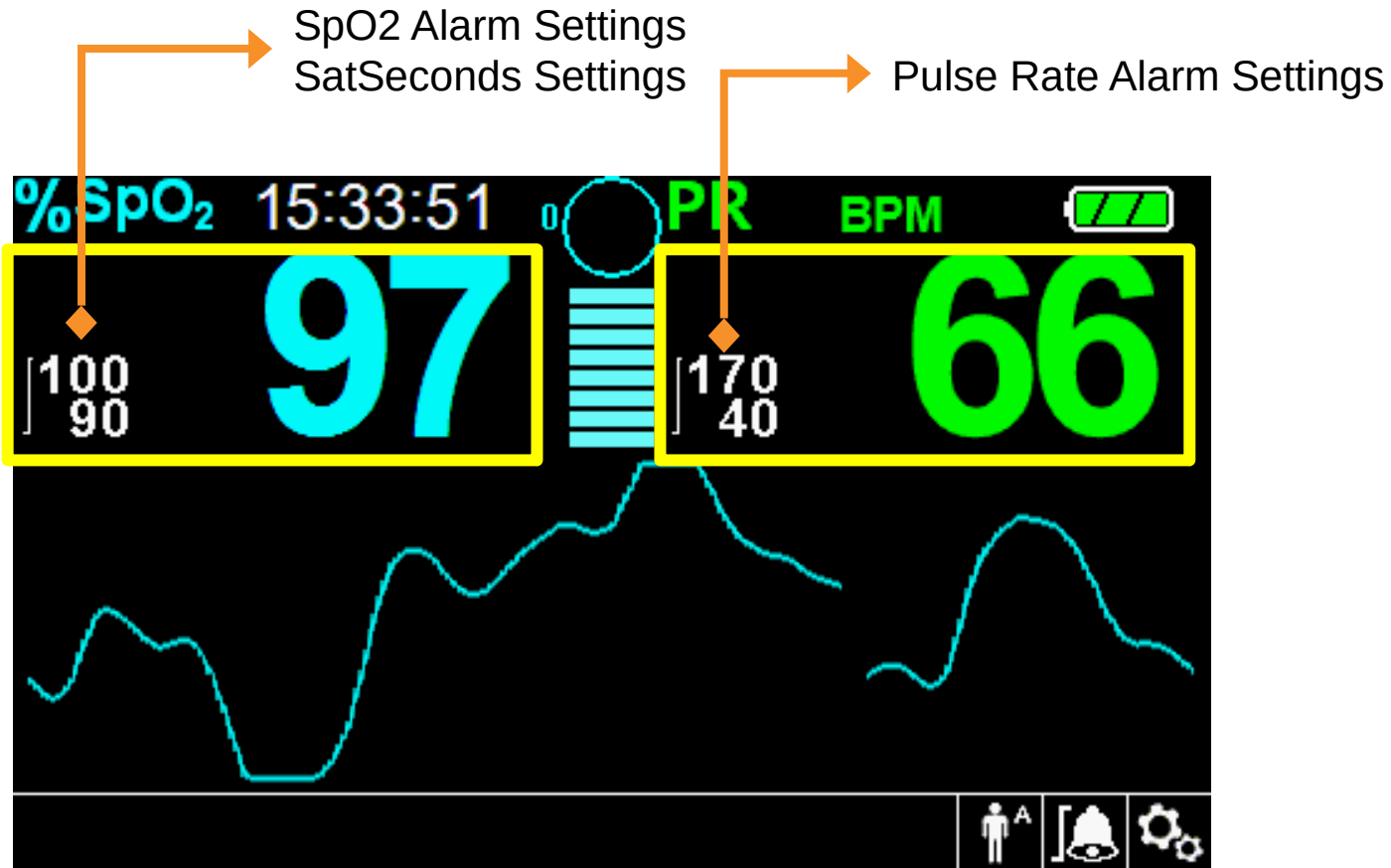
Alarm Paused Icon

Adjust Up/Down

SpO2, PR, SatSeconds

Alarm Icon	Status
	Alarm Active
	Alarm Audio Paused
	Alarm audio deactivated in Service Menu
	Alarm Audio icon in Sleep Study Mode

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Standard Monitoring Quick Access Menus

For quick access to alarm settings, rotate the knob to highlight one of two areas and press.

Hands on Review

- Attach the sensor to a patient
  - Determine the patient's real time SpO2 and PR reading

  - Set parameter alarm limits
    - SpO2 target range: 85% to 100%
    - Pulse rate target range: 80 bpm to 110 bpm

- Once alarm limits are set
  - Discuss alarm status
    - What do you see?
    - What do you hear?

  - How would you respond to the alarm(s)?

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Standard Monitoring Patient Mode Menu

To access the Patient Mode Menu, turn the knob to highlight the patient mode display area and press the knob.

Patient Mode Menu

PATIENT MODE MENU
- Adult ✓
- Pediatric
- Neonatal

Return
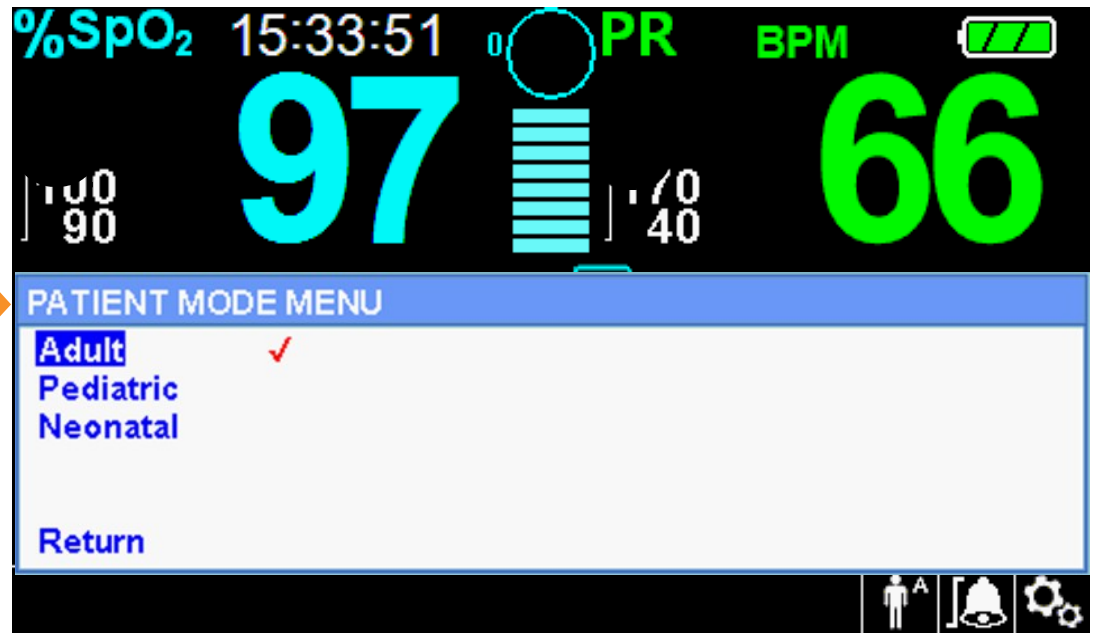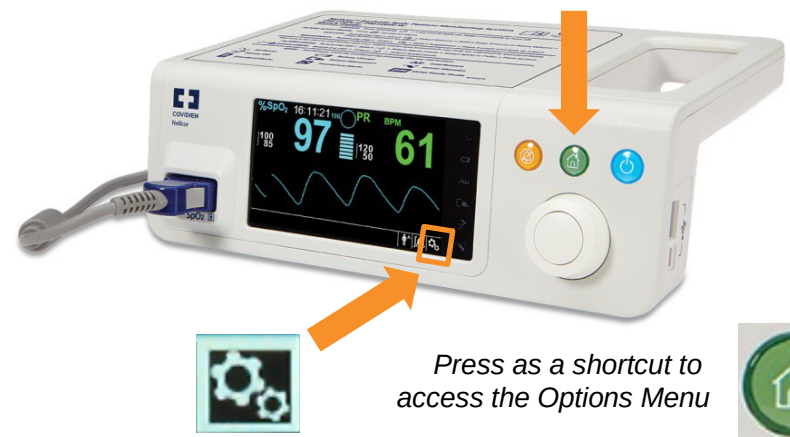
Adult: Use for adults.

Pediatric: Use for children.

Neonatal: Use for newborns.

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Standard Monitoring Options Menu

To access the Options Menu, turn the knob to highlight the Options Icon and press the knob.

Press as a shortcut to access the Options Menu
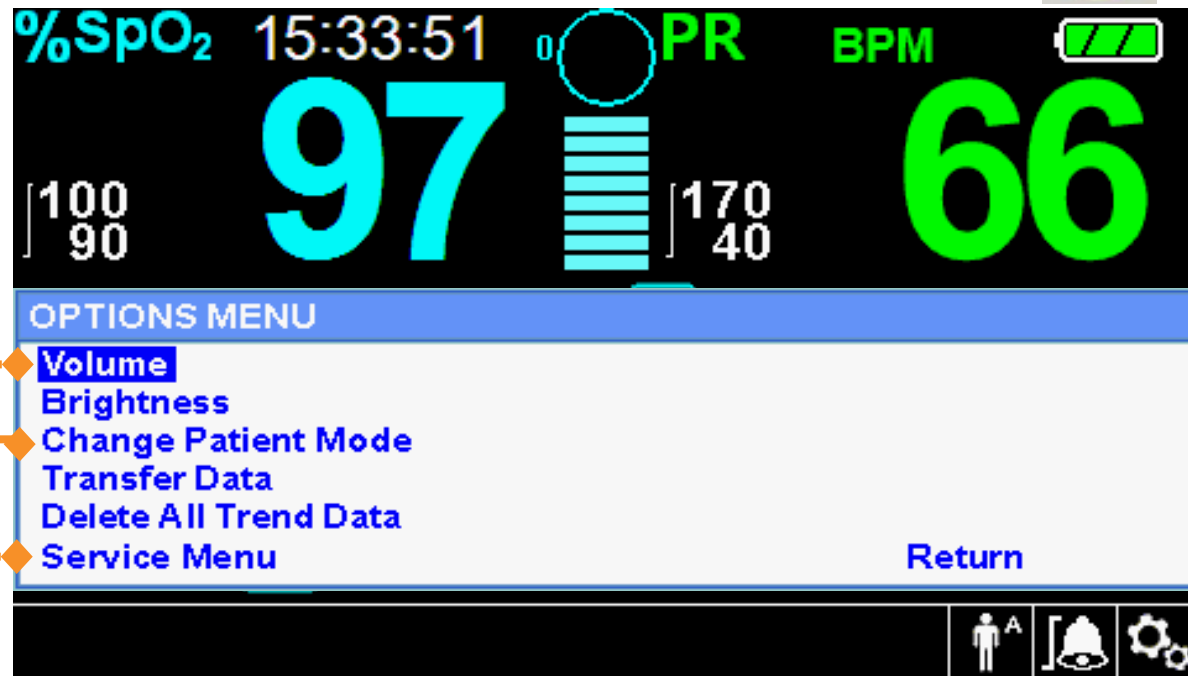
Volume Adjustment

- Alarm
- Key Beep
- Pulse

Patient Response Mode

- Normal
- Fast

Service Menu

1. Power On Settings
2. Alarm Audio Paused
3. Alarm Audio Reminder
4. Permission to Mute Alarm
5. Language
6. Date/Time Setting
7. System Information
8. System Test
9. Trend Data Download Settings
10. Homecare Mode Settings
11. Communication settings
12. Alarm Priorities
13. Password Settings

OPTIONS MENU

- Volume
- Brightness
- Change Patient Mode
- Transfer Data
- Delete All Trend Data
- Service Menu

Return

Hands on Review

- Your next patient is a 1 year old child.
  - Set the pulse oximeter to the appropriate patient mode.

- It is very loud in the patient's room.
  - Set the alarm volume to the loudest setting for SpO2 and PR.

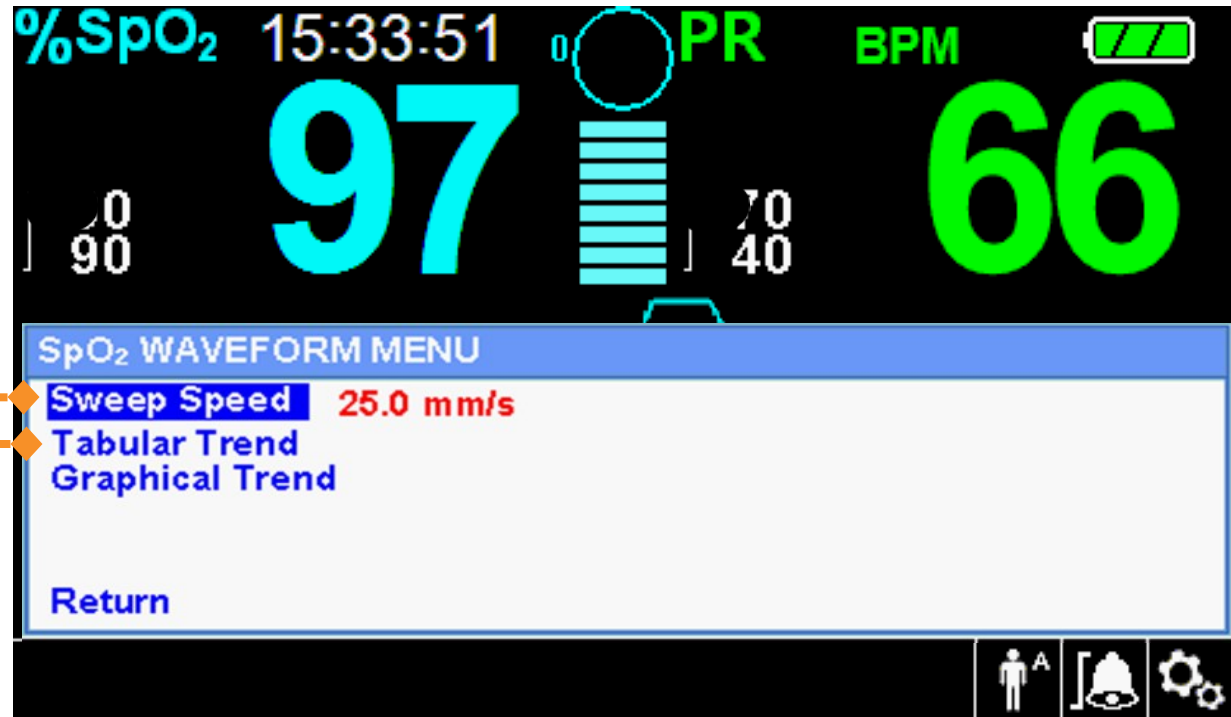**COVIDIEN**

Standard Monitoring SpO2 Waveform Menu

To access the SpO2 Waveform Menu, turn the knob to highlight the waveform or trend display area and press the knob.

Sweep Speed
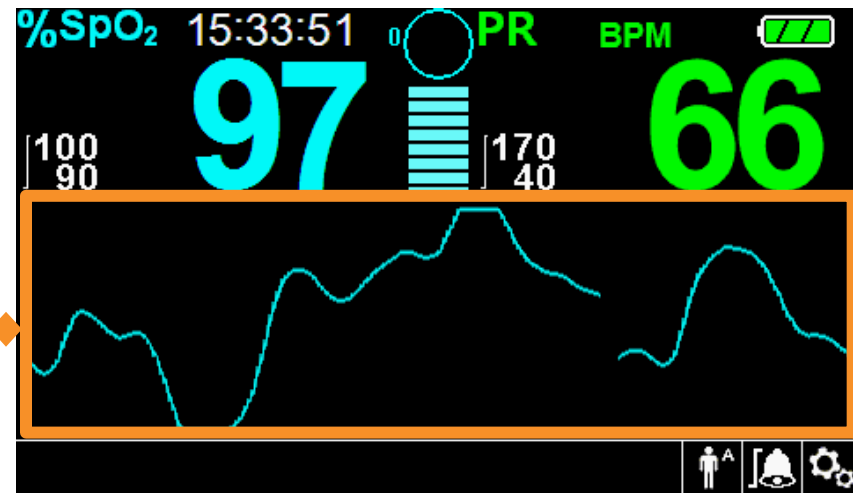
- 6.25mm/s
- 12.5mm/s
- 25mm/s

Trend Data

- 88,000 data events
- 96 hours
- Collected every 4 seconds

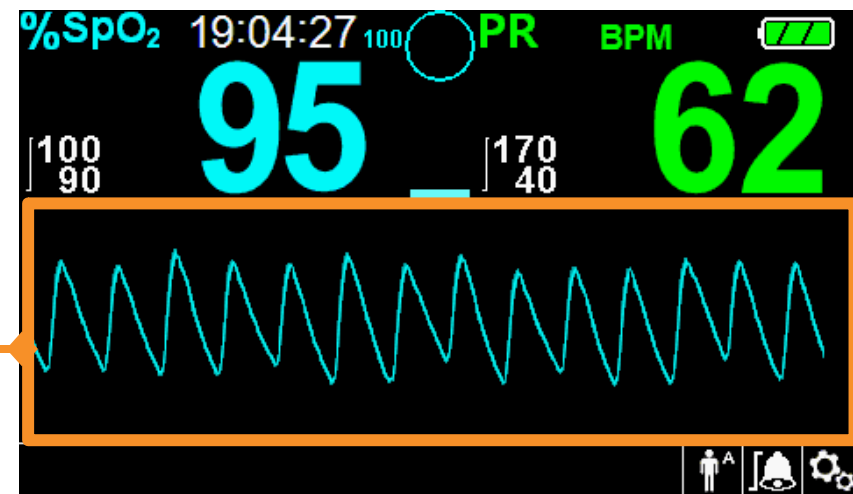**COVIDIEN**

Standard Monitoring Sweep Speed Overview

Allows the clinician to set the speed to where the SpO2 waveform trace moves across the screen.
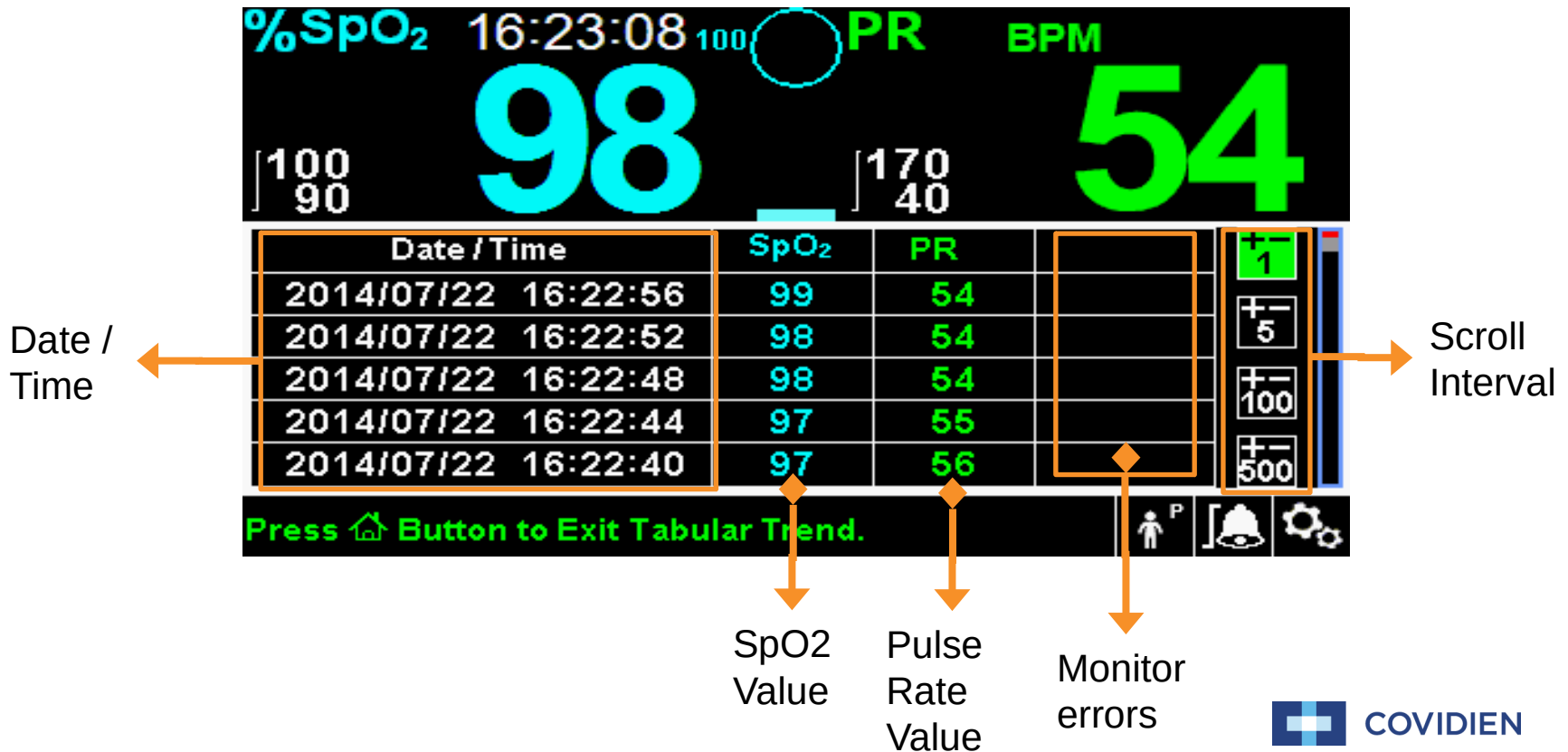
Sweep Speed = 25.0mm/s
(i.e. "Zoom In")

The higher the sweep speed value, the more granular the data appears on the screen.

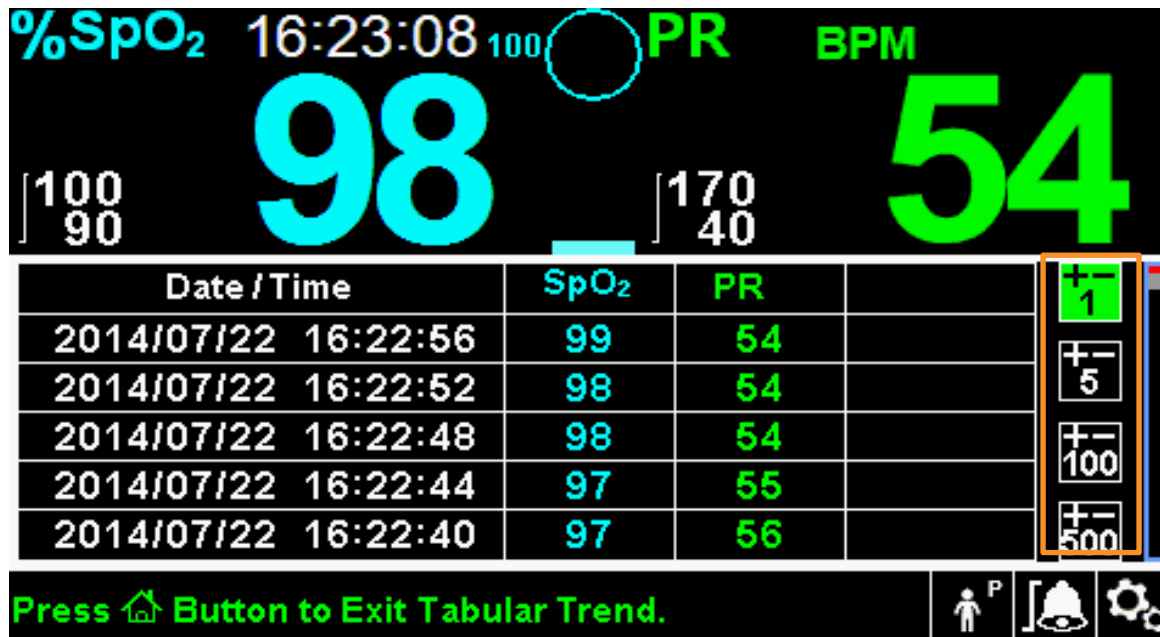Sweep Speed = 6.25mm/s
(i.e. "Zoom Out")

Standard Monitoring Tabular Trend View

To access the Tabular Trend View, turn the knob to highlight the waveform or trend display area and press the knob. Select Tabular Trend and press the knob.

Date / Time		SpO₂	PR		
2014/07/22 16:22:56		99	54		+−1
2014/07/22 16:22:52		98	54		+−5
2014/07/22 16:22:48		98	54		+−100
2014/07/22 16:22:44		97	55		+−500
2014/07/22 16:22:40		97	56		

Press 🏠 Button to Exit Tabular Trend.

Date / Time

Scroll Interval

SpO2 Value

Pulse Rate Value

Monitor errors

COVIDIEN

Standard Monitoring Tabular Trend Scroll

To scroll through the Tabular Trend View, rotate the knob to the left for historical data and to the right to get back to present time

Scroll Interval Options

- 1 (every 4 sec)
- 5 (every 20 sec)
- 100 (~6.5 min)
- 500 (~33.5 min)

Turn knob to the left for historic data

Note: To change Scroll highlight Interval Options, press the knob.

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Standard Monitoring Trend Data Download

To access the Trend Data Download Menu, turn the knob to highlight the Options Menu and press.

Mini-USB Port

1. Connect mini-USB port to a PC
2. Select Options
3. Select Trend Data Download
4. Select Start

COVIDIEN
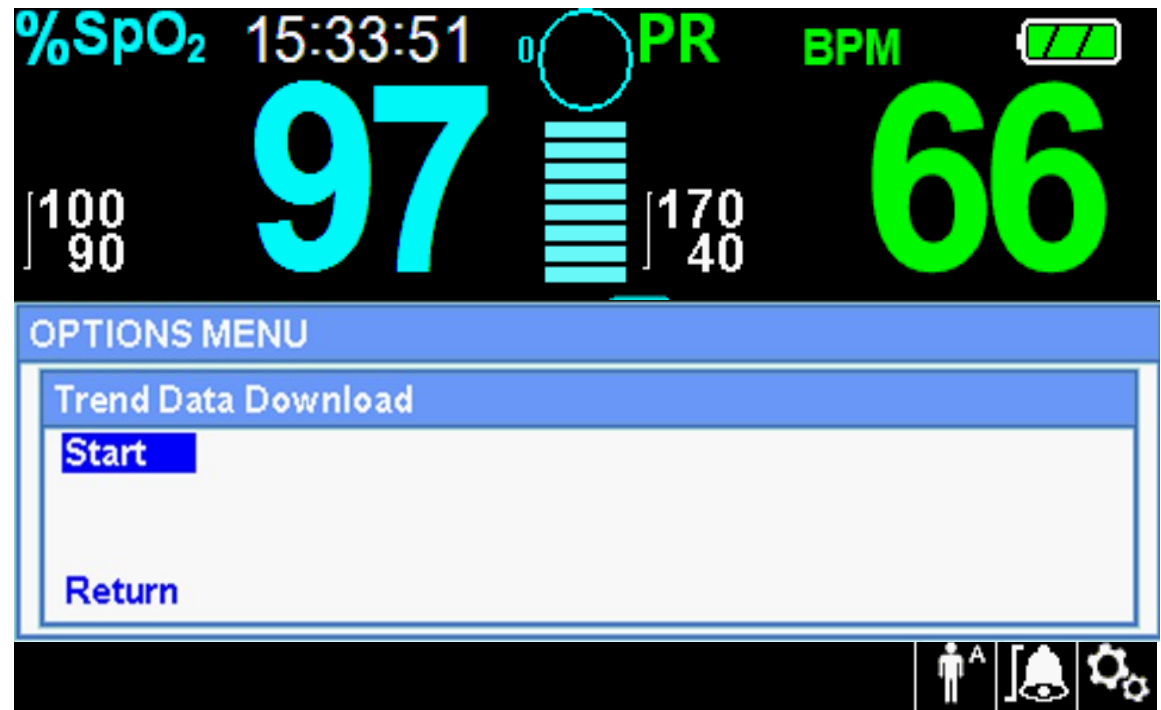
Standard Monitoring Graphical Trend View

To access the Graphical Trend View, turn the knob to highlight the waveform or trend display area and press the knob. Select Graphical Trend and press the knob.
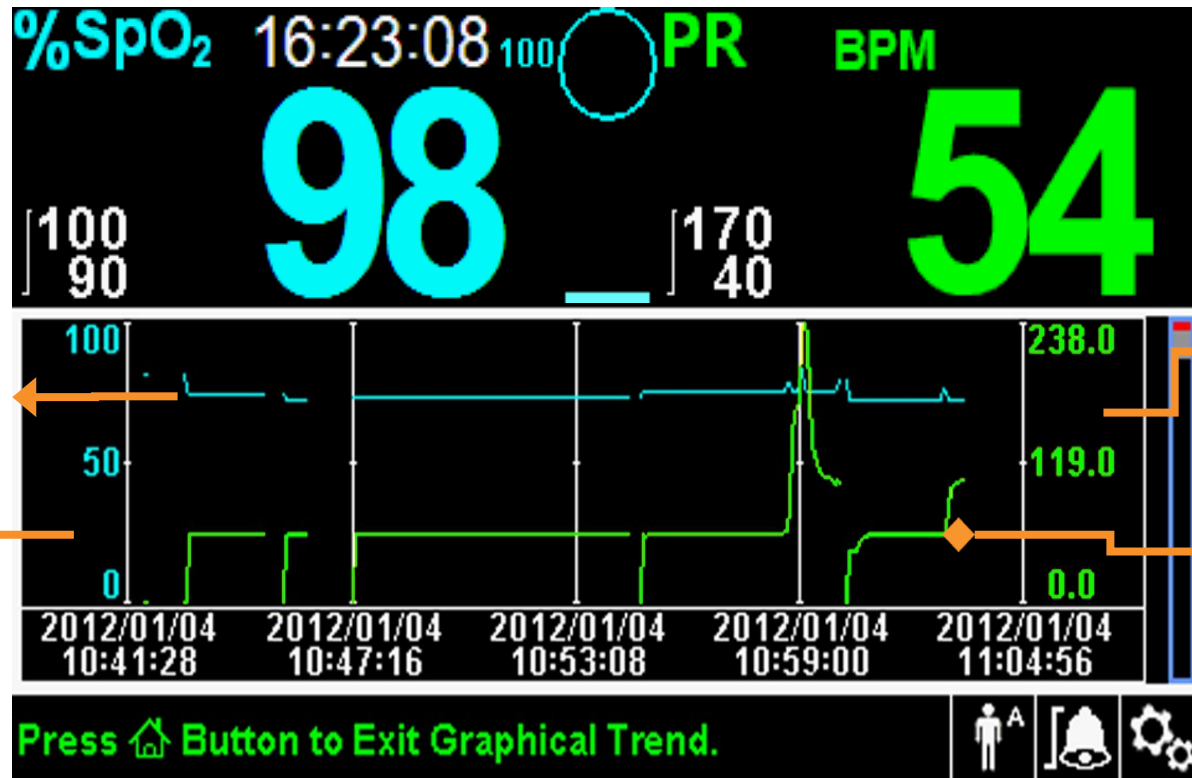

SpO2 Trend Line
(blue line)

SpO2 Scale

Pulse Rate Scale

Pulse Rate Trend Line
(green line)

Hands on Review

- Access tabular trend data for your patient
  - How have your patient's SpO2 values changed in the last hour?
  - How have your patient's PR values changed in the last hour?

- Use the scroll interval options to review your patient's data from 3 hours ago.

- Download your patient's data using the data download capability.
- How would you use graphical trend?

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Standard Monitoring SatSeconds™ Alarm Management Setting

SatSeconds Setting

SatSeconds Icon

COVIDIEN
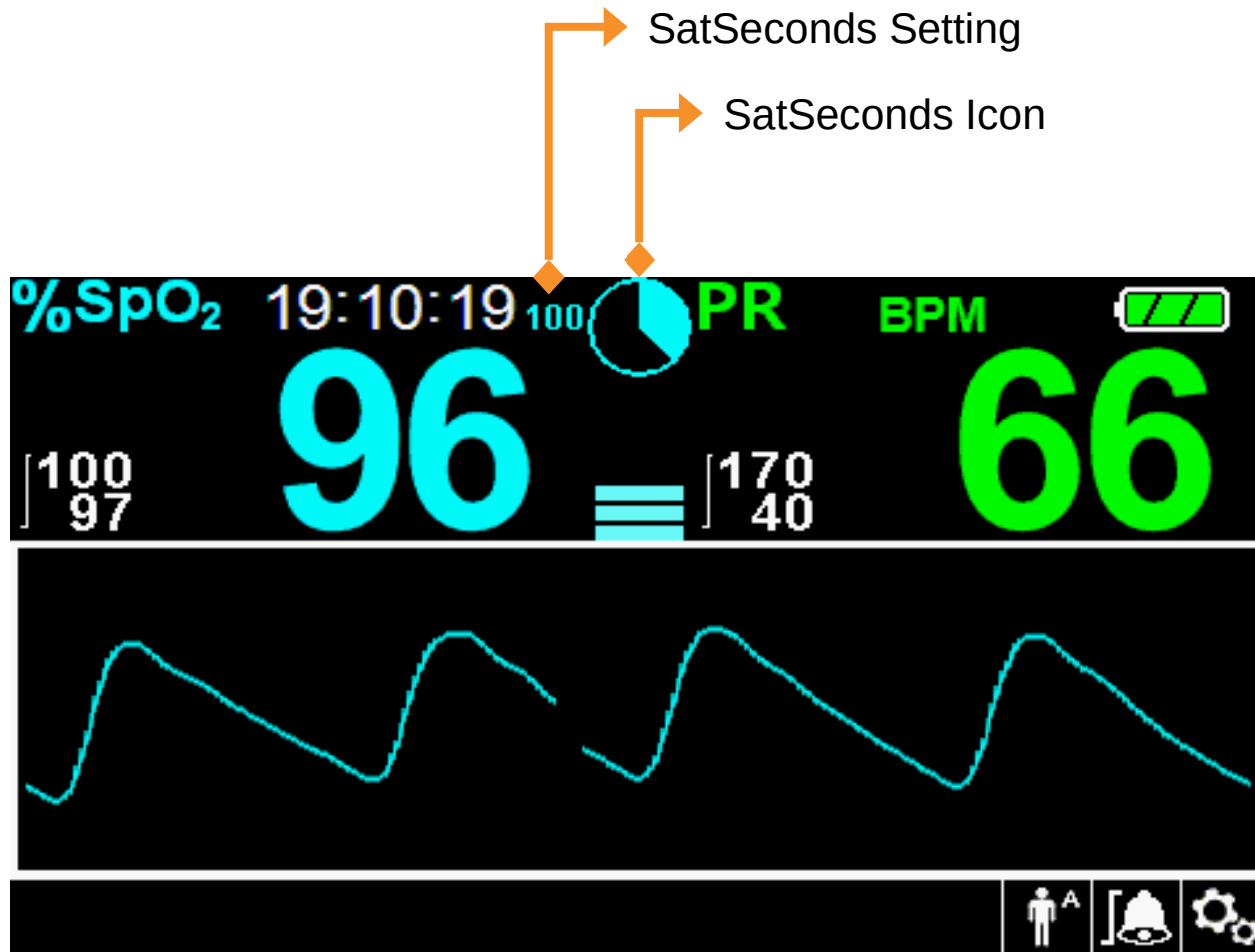
Standard Monitoring Alarm Limits Menu

To access SatSeconds™ Alarm Limits Menu, turn the knob to highlight the alarm limits display area and press the knob.
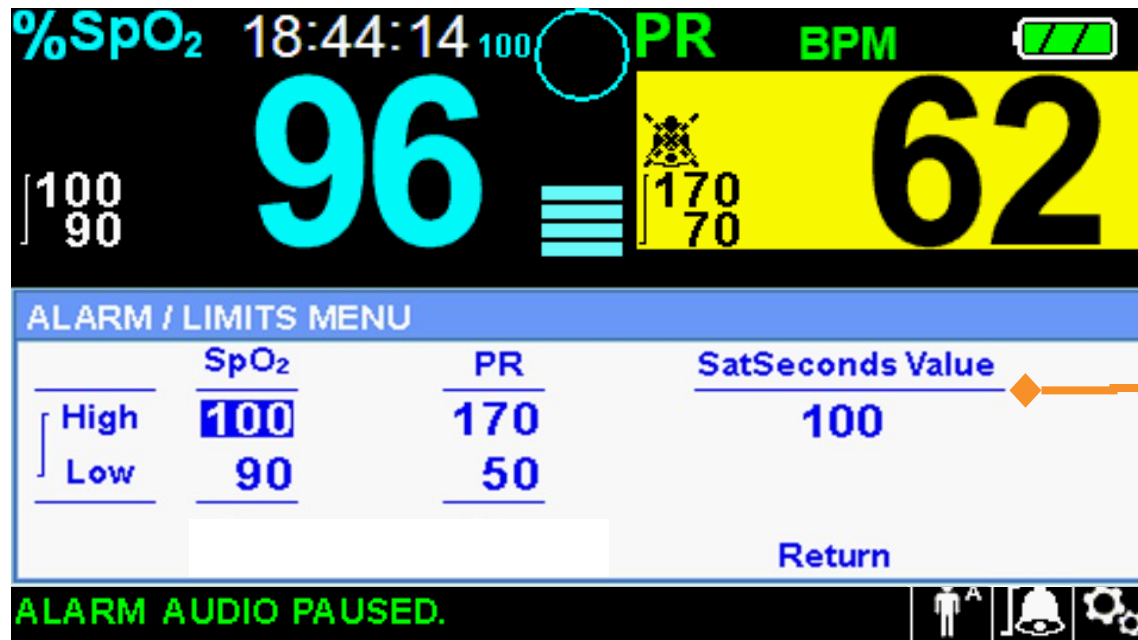

SatSeconds Value

Can be adjusted to off, 10, 25, 50, 100

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Hands on Review

- Activate SatSeconds™ Alarm Management
  - If you want to minimize clinically insignificant alarms that occur with your patient, set SatSeconds to 100.
  - How would you respond to a SatSeconds Alarm?
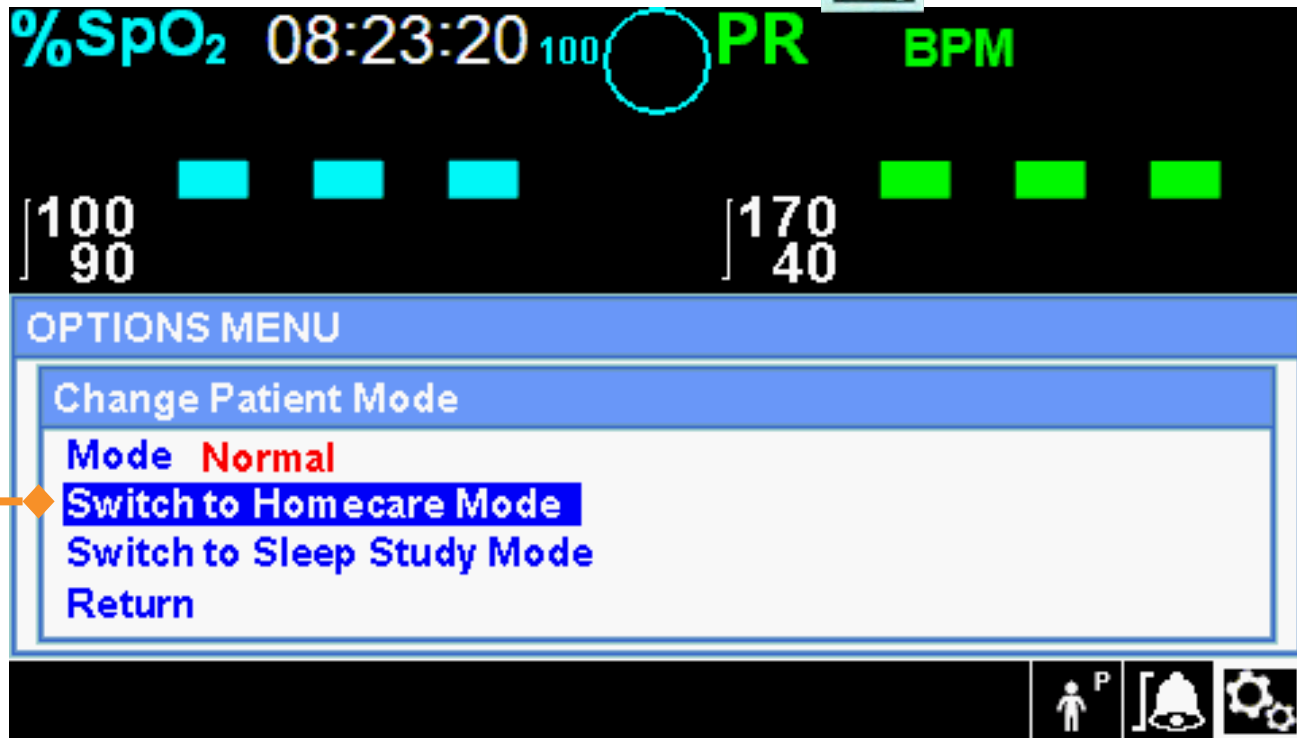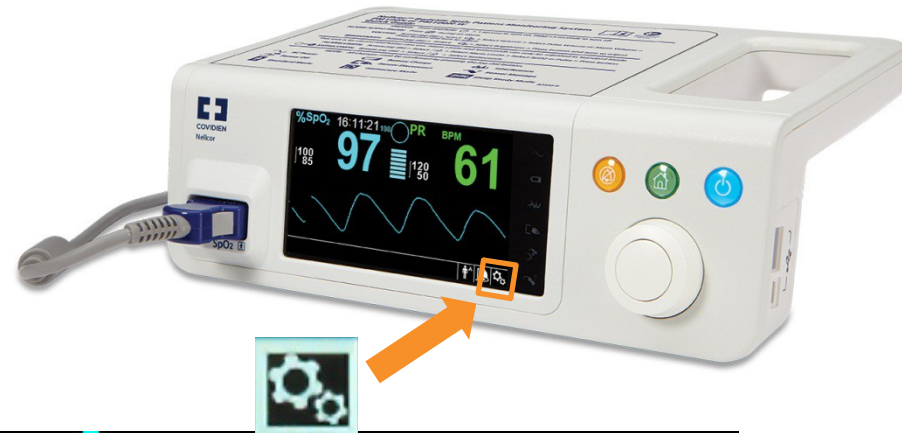
COVIDIEN

Homecare Mode

To access Homecare Mode, turn the knob to highlight and select the Options Menu. Within menu, select the Change Patient Mode display area and press the knob.
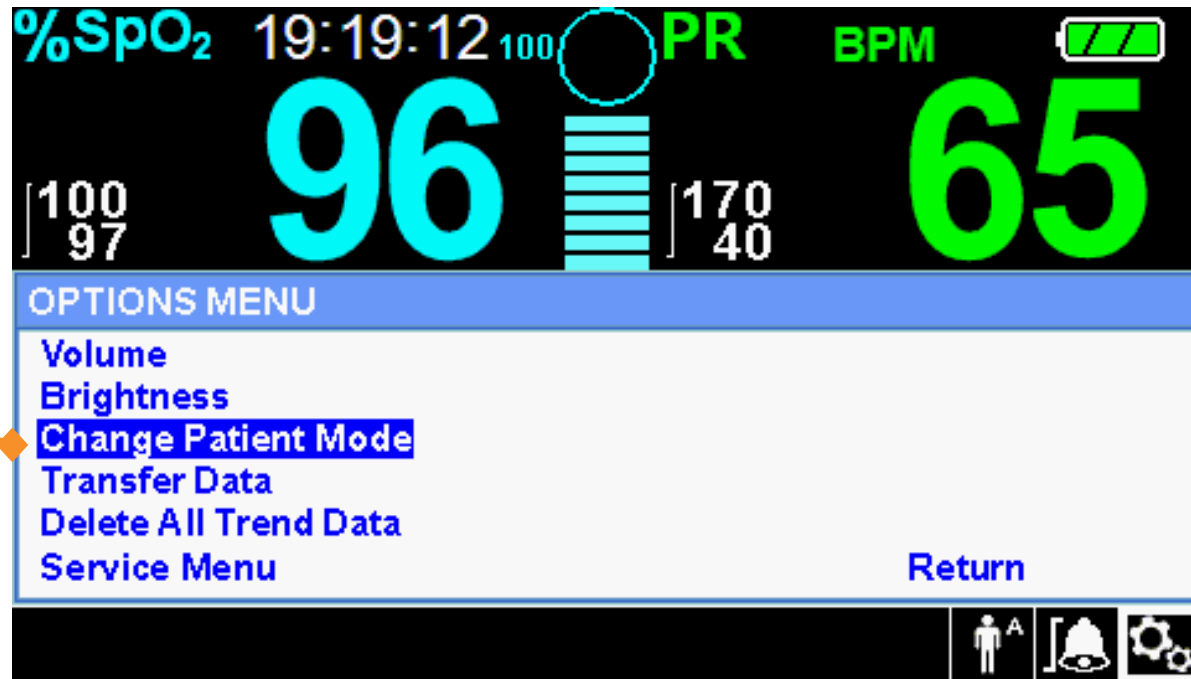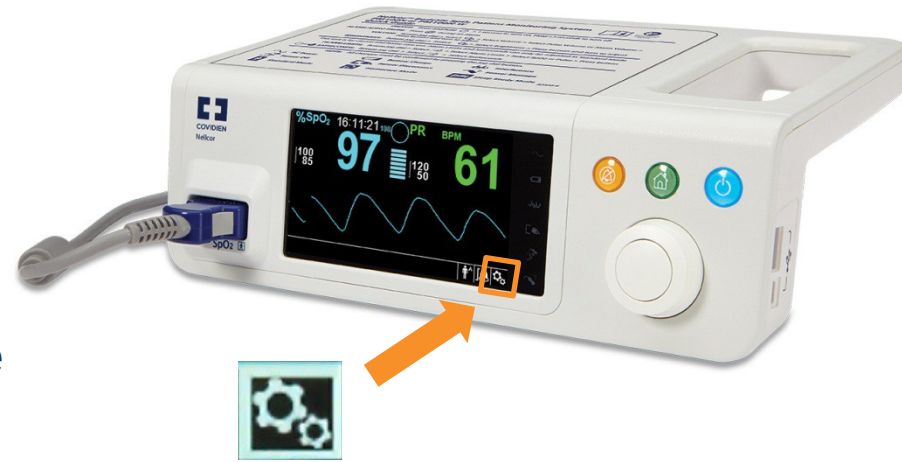
Turn knob to highlight Change Patient Mode and press the knob
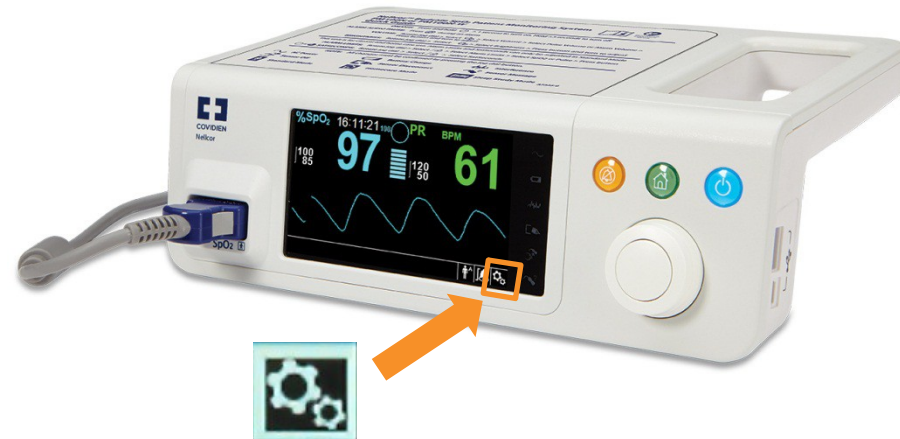
COVIDIEN

Homecare Mode

After selecting Change Patient Mode display area, highlight Switch to Homecare and press the knob.

Turn the knob to highlight Switch to Homecare and the press knob.
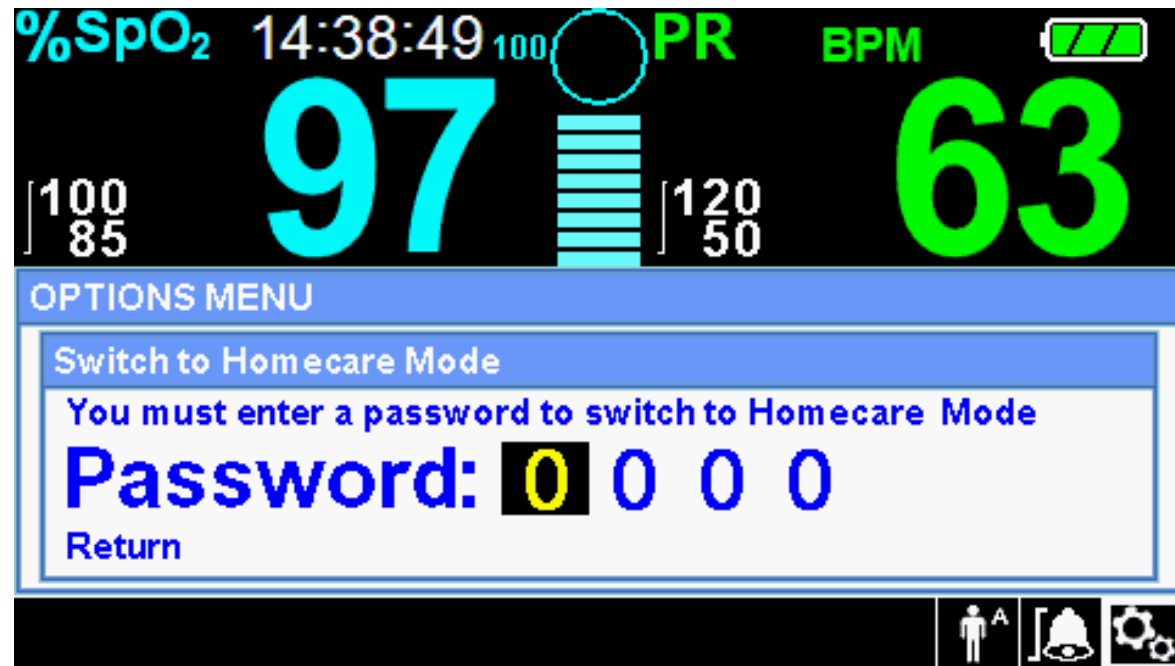
COVIDIEN

Homecare Mode

After selecting Switch to Homecare display area, enter passcode.

Entering Passcode:

- Turn the knob to highlight the number in passcode and press the knob.

- Once number is highlighted in yellow, turn knob to change number then press the knob to select.

- Once number is selected, repeat process for remaining passcode numbers.
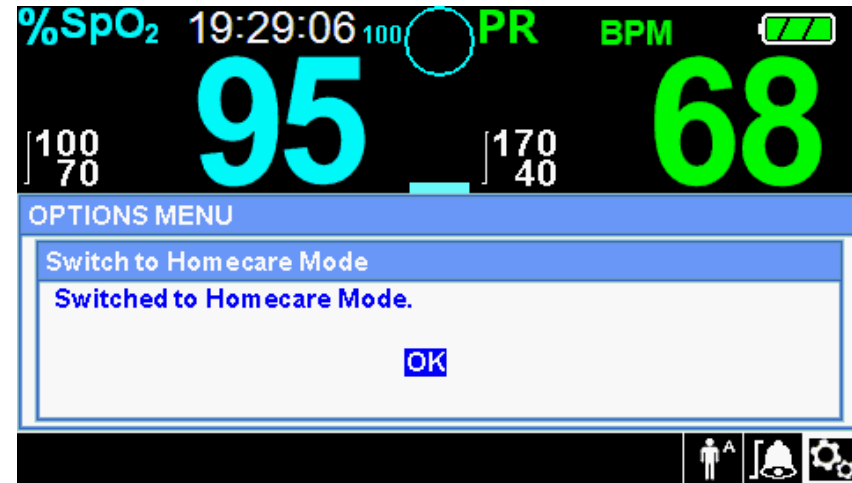

COVIDIEN

Homecare Mode

After passcode is entered, a confirmation screen will pop up. Select OK and then you will be in Homecare Mode.

Select OK and press the knob
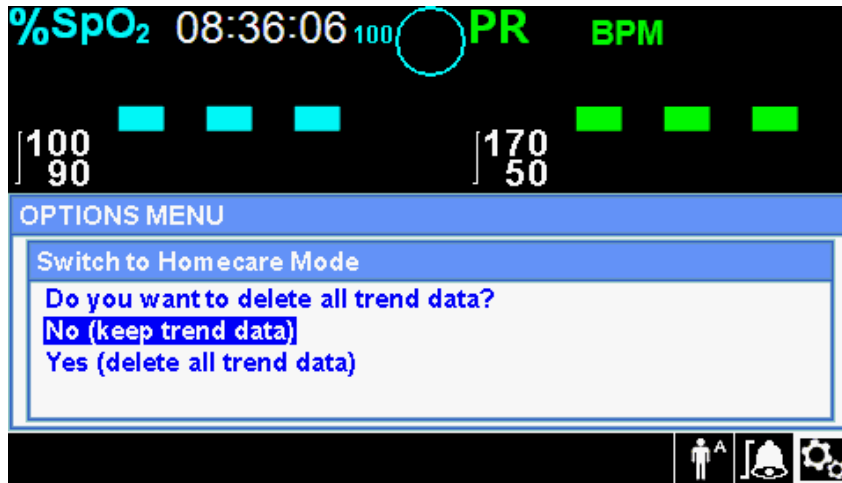
Note: The Homecare mode monitoring screen does not appear until the user presses the knob to select OK

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Sleep Study Mode

To access Sleep Study Mode, turn the knob to highlight the Options Menu and select the Change Patient Mode display area and press the knob.

Turn the knob to highlight Change Patient Mode and press the knob

COVIDIEN

Sleep Study Mode

After selecting the Change Patient Mode , then highlight Switch to Sleep Study and press the knob.
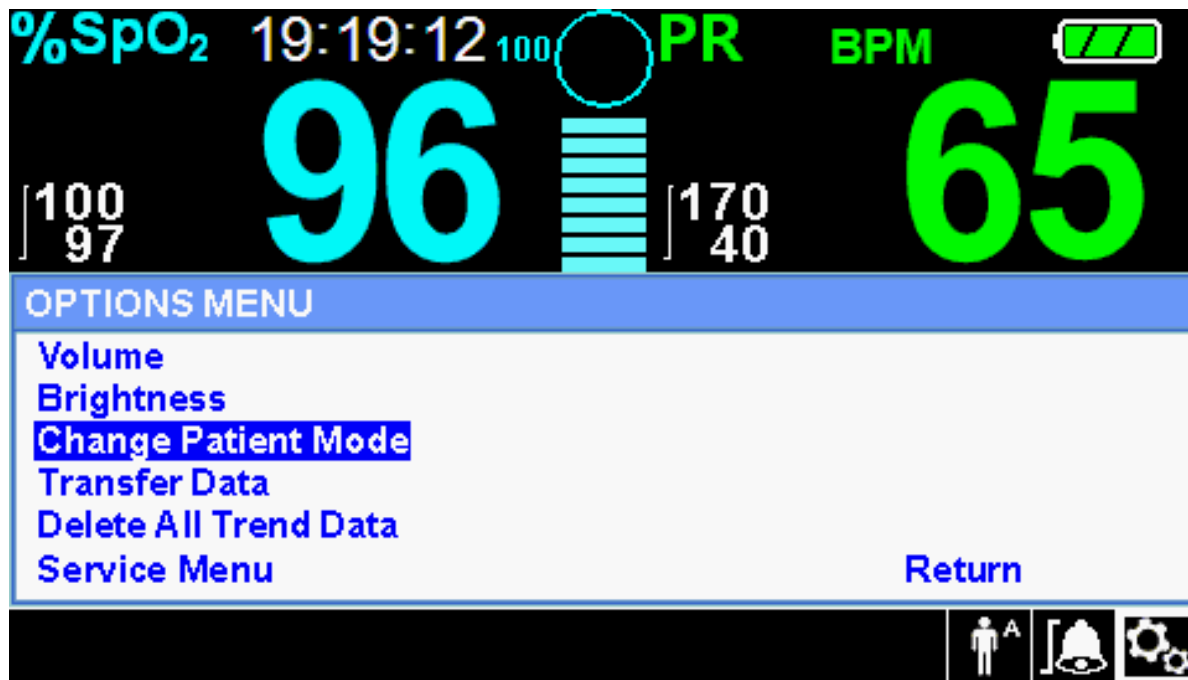

%SpO₂ 19:34:00 100 ○ **PR** **BPM**

97   **63**

100
70   170
40

OPTIONS MENU

Change Patient Mode

Mode Normal
Switch to Homecare Mode
Switch to Sleep Study Mode
Return

%SpO₂ 15:29:40 100 ○ **PR** **BPM**

100
90   170
50

OPTIONS MENU

Switch to Sleep Study Mode

Entering Sleep Study Mode will disable alarms.
Are you sure you want to enter Sleep Study Mode?

Confirm   Cancel

Sleep Study Mode

%SpO₂ 10:04:28 100 ○ **PR** **BPM**

96   **65**

100
90   170
70

%SpO₂ 08:30:03 100 ○ **PR** **BPM**

100
90   170
40

OPTIONS MENU

Switch to Sleep Study Mode

Do you want to delete all trend data?
No (keep trend data)
Yes (delete all trend data)