

Assembling the Large Color Display

Refer to [Figure 22](#), [Figure 23](#) on page 30, or [Figure 24](#) on page 31.

Figure 22. Mounting the Interface Box (with Face Plate) on the Large Display Mounting Bracket

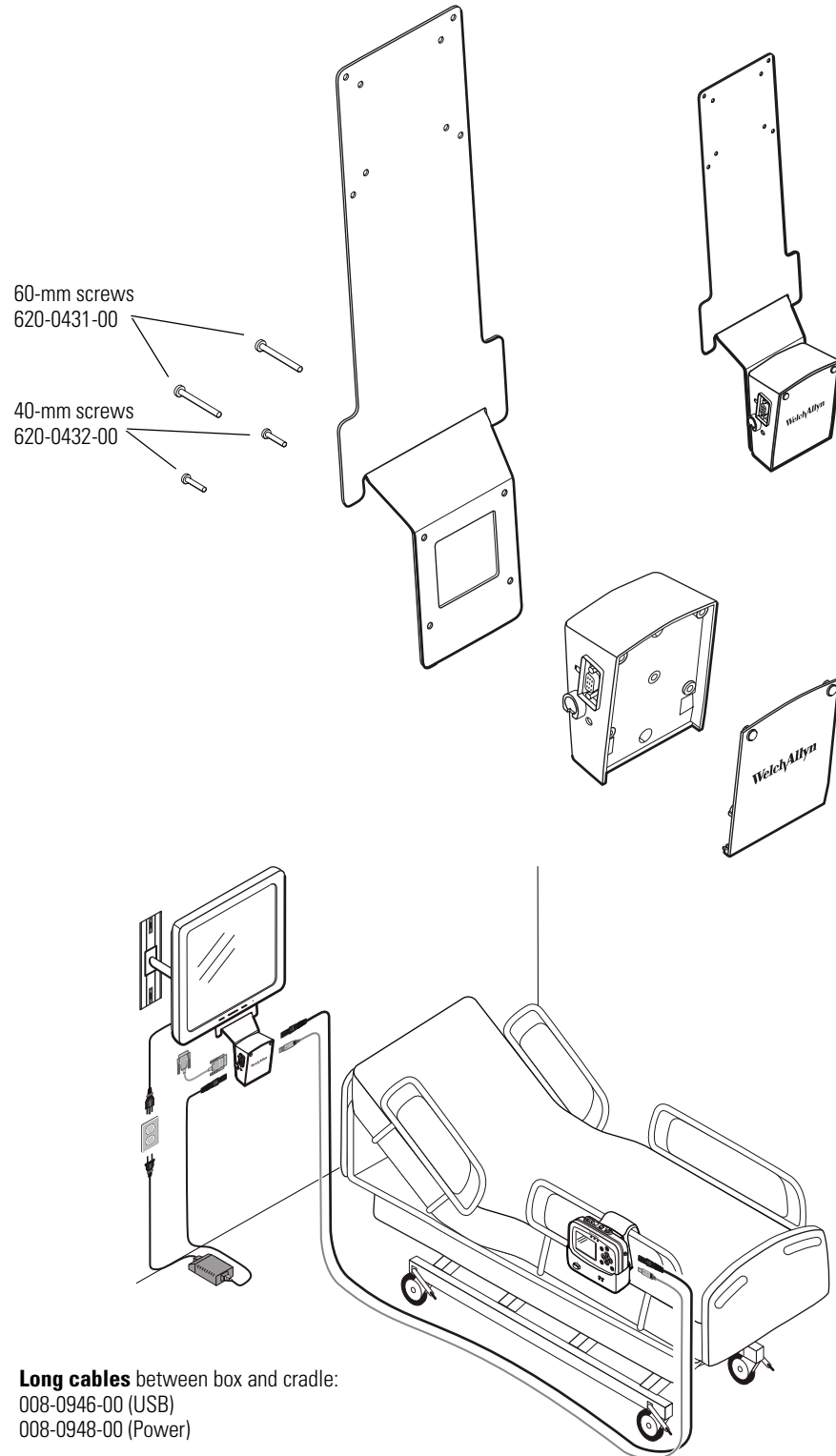
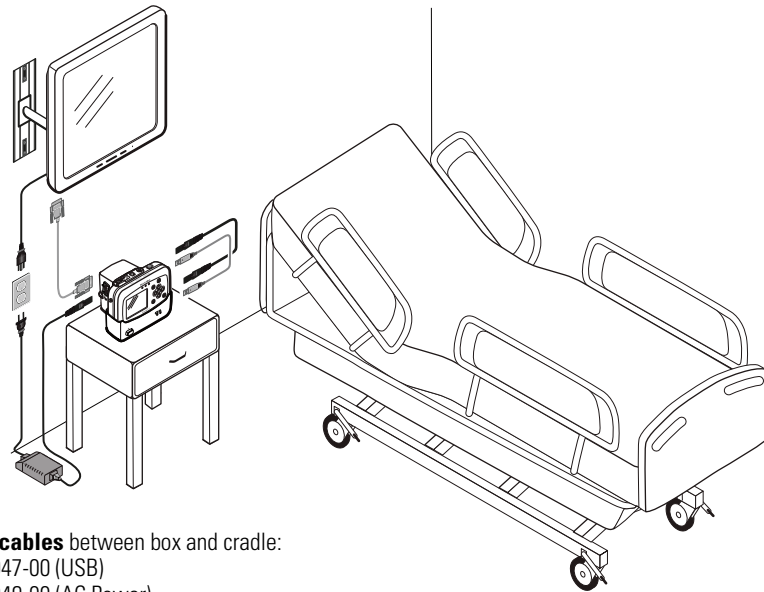
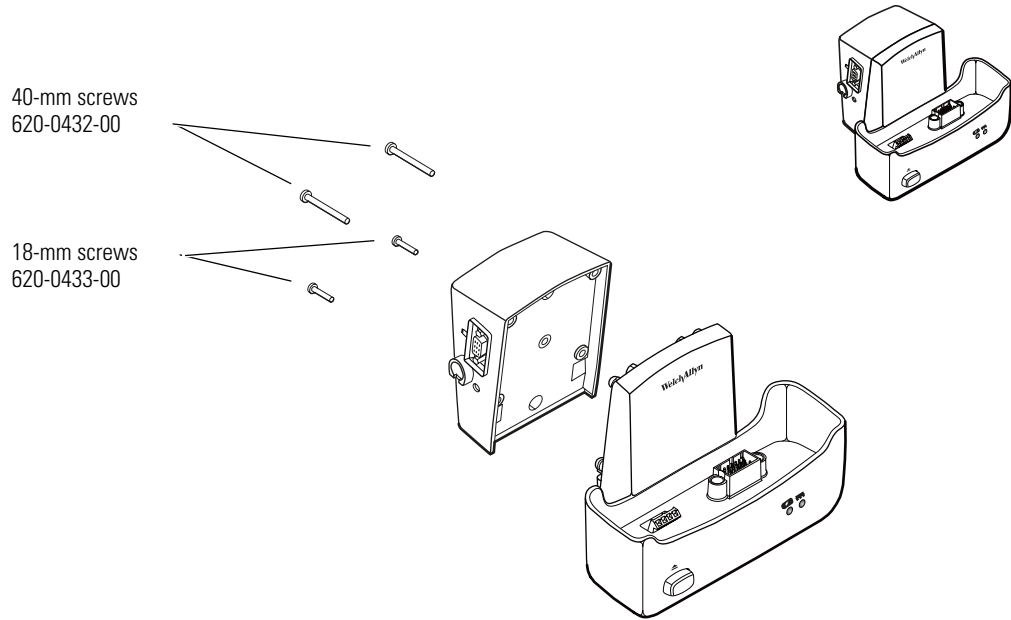
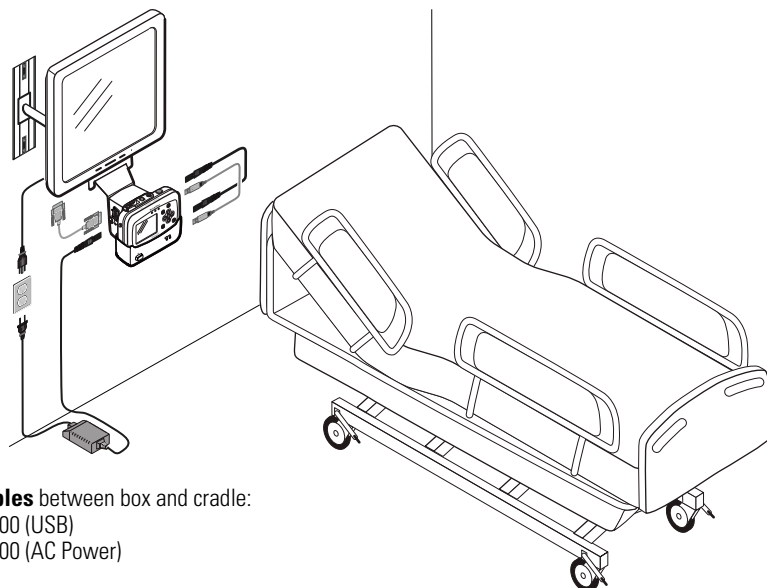
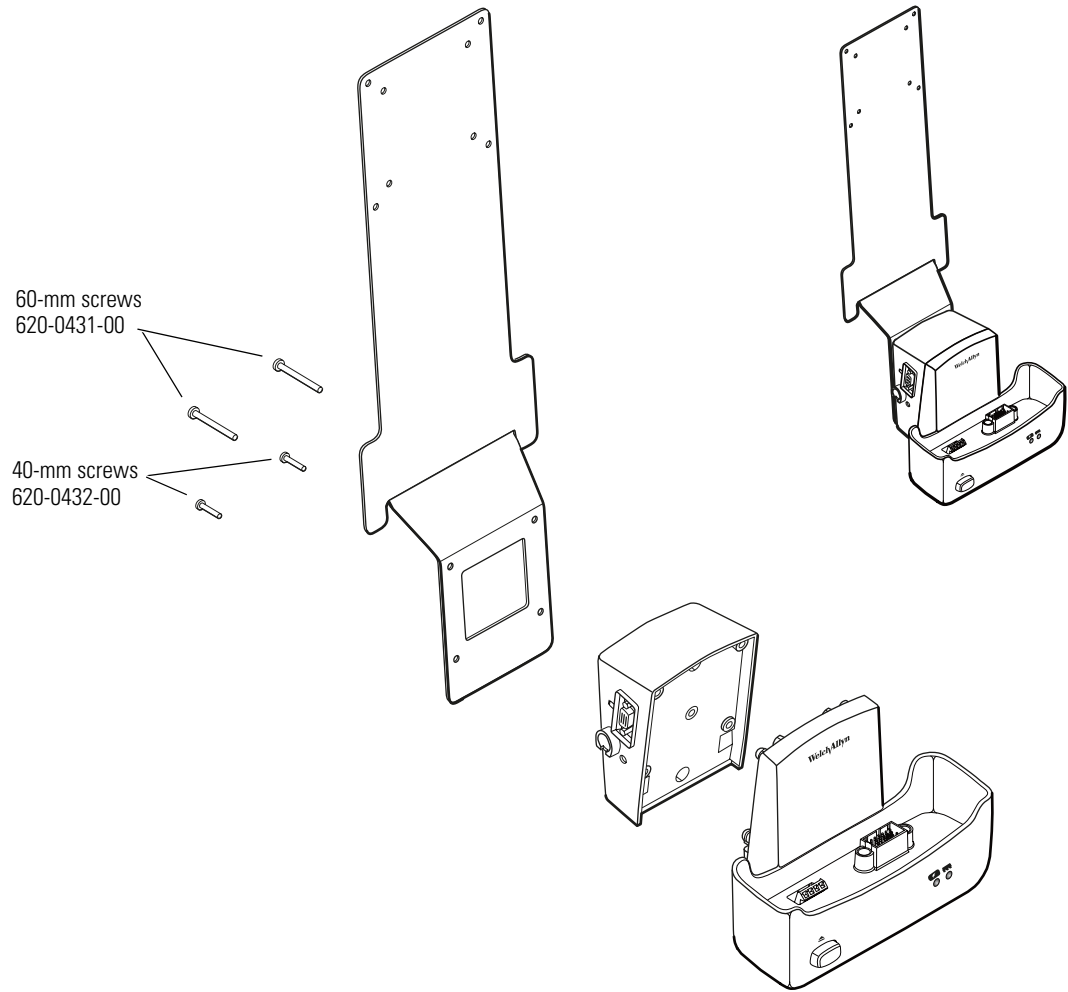


Figure 23. Mounting the Interface Box on the Cradle



Short cables between box and cradle:
008-0947-00 (USB)
008-0949-00 (AC Power)

Figure 24. Mounting the Interface Box and the Cradle on the Large Display Mounting Bracket



Short cables between box and cradle:
008-0947-00 (USB)
008-0949-00 (AC Power)

About Navigation

You navigate the monitor screens using ▲, ▼, ◀ and ▶ (arrow buttons), ● (action button), and  (display button).

Using the Arrow Buttons

Use ▲, ▼, ◀ and ▶ to do the following:


- Highlight an item on the display. (See [“Using the Highlights”](#) on page 33.)
- Select options from a control menu.
- Use ▲ and ▼ to select options from a pop-up menu.
- Use ◀ and ▶ to change the values of numeric parameters.

Using the Action Button

Use ● to do the following:

- Display the control menu for a blue-highlighted item.
- Return from a control menu to the primary display.
- Access the Setup menu when Setup is highlighted.
- Display tabular and graphical trends when Trends is highlighted.
- Display snapshots when Snapshot is highlighted.
- Turn on the display or the back light if either has been turned off by a time-out.
- Display a pop-up menu.

Using the Display Button

Use  to do the following:

- Cycle through the configured display formats.
- Return from a control menu to the primary display.
- Close a pop-up menu.

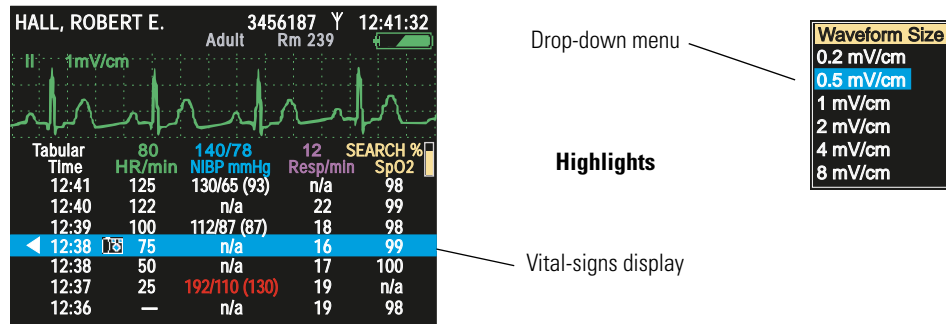
Using the Highlights

Every screen contains a single element—the current context—highlighted by a blue field. Some screens also contain elements—parameter values—highlighted by a green field.

About Blue Highlights

A **blue highlight** identifies the **current context**. For example, [Figure 25](#) illustrates a highlighted **row** in a trends display and a highlighted **setting** in the Waveform Size menu.

Figure 25. Examples of Highlighted Elements





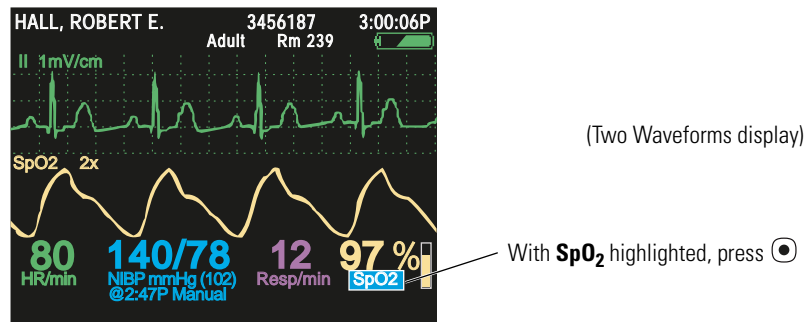
In a display screen (see “About Display Formats” on page 21), pressing  causes the monitor to replace the current screen with another screen related to the current context. For example, if **SpO₂** is highlighted in the Two Waveforms display ([Figure 26](#)) and you press ...

Figure 26. Using the Action Button ()



...the monitor presents the **SpO₂ control menu** ([Figure 27](#)).

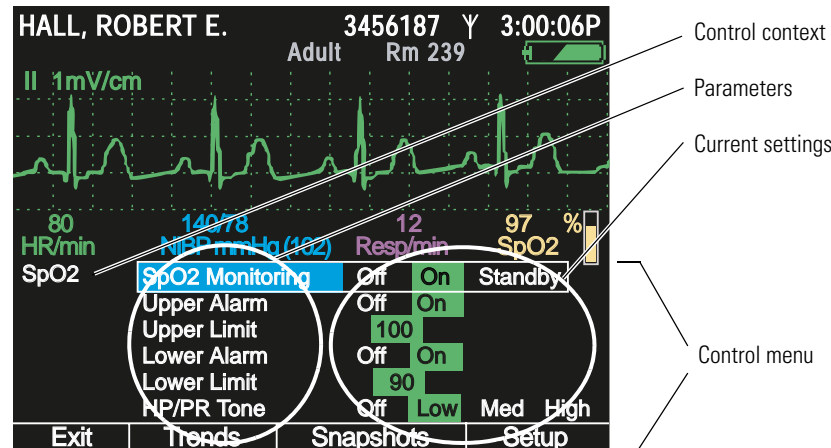
About Green Highlights

Green highlights identify the current values of multiple parameters within a given context. For example, in the control menu shown in [Figure 27](#), the current settings of the SpO₂ parameters are highlighted in green.

Menus

Using Control Menus

Figure 27. SpO₂ Control Menu (Example)



A control menu includes a topic name for the current context (for example, **SpO₂**); a column of parameters with one highlighted (for example, **SpO₂ Monitoring**); and a column of options, with one item in each set of options highlighted (for example, **Standby, On, 100, On, 90, Low**).

The blue highlight indicates the parameter currently enabled for modification.

The green highlights indicate the current settings for all parameters in the menu.

At the bottom of the screen for all control menus are links to **Exit, Trends, Snapshots,** and **Setup**.

Exit Return to the vital-signs display.

Trends View a tabular history.

Snapshots View a series of 21-second waveform snapshots of the current patient's vital signs.

Setup Access the setup menu. (See ["To Access the Setup Menus"](#) on page 38.)

Example: Using a Control Menu

Using the example (Figure 27), you would do the following to raise the SpO₂ lower alarm limit to 95 (Step 1) and shut off the HR/PR tone (Step 2):

1. With **SpO₂ Monitoring** highlighted, scroll (using ▼) to highlight **Lower Limit**, and press ▶ as many times as needed to raise this alarm limit to **95**.

Note If you decrease an upper alarm limit to a value almost as low as the lower limit, the lower limit decreases so that it is always lower than the upper limit.
If you increase a lower alarm limit to a value almost as high as the upper limit, the upper limit increases so that it is always higher than the lower limit.

2. Scroll (using ▼) to **HR/PR Tone**, and press either ◀ or ▶ as many times as needed to highlight **Off**.

Note When you change a setting (for example, by turning off an alarm limit or by increasing or decreasing an alarm limit), the change takes effect immediately.

3. Press ⏻ or ⏮ to exit the control screen and return to the vital-signs display.

Note When you exit a control menu, *the values displayed at the time you exit are the values in effect for the monitor.* If you change a parameter setting and then decide before exiting the control menu to keep the previous setting values, you must return the parameters to the original values before you exit the control menu.

About the HR/PR Control Menu

Parameter	Options	Parameter	Options
Upper Alarm	Off On	Lower Alarm	Off On
Upper Limits		Lower Limits	
Adult	27 - 300 beats/minute	Adult	25 - 298 beats/minute
Pediatric	27 - 300 beats/minute	Pediatric	25 - 298 beats/minute
Neonate	27 - 300 beats/minute	Neonate	25 - 298 beats/minute
HR/PR Tone	Off Low Med High	Selected Source	ECG SpO ₂

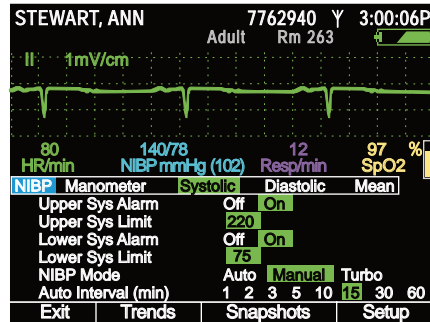
About the SpO₂ Control Menu

Parameter	Options	Parameter	Options
SpO ₂ Monitoring	Off On Standby	HR/PR Tone	Off Low Med High
Upper Alarm	Off On	Lower Alarm	Off On
Upper Limit		Lower Limit	
Adult	52% - 100%	Adult	50% - 98%
Pediatric	52% - 100%	Pediatric	50% - 98%
Neonate	52% - 100%	Neonate	50% - 98%

About the NIBP Control Menu

The NIBP control (Figure 28) has four submenus: Manometer, Systolic, Diastolic, and Mean. Press ◀ or ▶ to select a submenu.

Figure 28. NIBP Control Menu



Note For manometer information, see “To Use the Digital Manometer-” on page 73.

Parameter	Options
Systolic	
Upper Sys Alarm	Off On
Upper Sys Limit	
Adult	32 - 260 mmHg
Pediatric	32 - 160 mmHg
Neonate	27 - 120 mmHg
NIBP Mode	Auto Manual Turbo
Diastolic	
Upper Dia Alarm	Off On
Upper Dia Limit	
Adult	22 - 235 mmHg
Pediatric	17 - 130 mmHg
Neonate	12 - 105 mmHg
NIBP Mode	Auto Manual Turbo
MAP	
Upper MAP Alarm	Off On
Upper MAP Limit	
Adult	22 - 255 mmHg
Pediatric	17 - 140 mmHg
Neonate	12 - 110 mmHg
NIBP Mode	Auto Manual Turbo

Parameter	Options
Systolic	
Lower Sys Alarm	Off On
Lower Sys Limit	
Adult	30 - 258 mmHg
Pediatric	30 - 158 mmHg
Neonate	25 - 118 mmHg
Auto Interval (min)	1 2 3 5 10 15 30 60
Diastolic	
Lower Dia Alarm	Off On
Lower Dia Limit	
Adult	20 - 233 mmHg
Pediatric	15 - 128 mmHg
Neonate	10 - 103 mmHg
Auto Interval (min)	1 2 3 5 10 15 30 60
MAP	
Lower MAP Alarm	Off On
Lower MAP Limit	
Adult	20 - 253 mmHg
Pediatric	15 - 138 mmHg
Neonate	10 - 108 mmHg
Auto Interval (min)	1 2 3 5 10 15 30 60

About the Resp Control Menu

Parameter	Options	Parameter	Options
Resp Monitoring	Off On	Lower Alarm	Off On
Upper Alarm	Off On	Lower Limit	
Upper Limit		Adult	2 - 148
Adult	4 - 150	Pediatric	2 - 148
Pediatric	4 - 150	Neonate	3 - 148
Neonate	5 - 150	Resp Lead	Ld1 (RA-LA) Ld2 (RA-LL)

Using Setup Menus

Use the Setup menus to define settings for monitor behavior.

Setting	Options	Setting	Options
Alarms		NIBP	
Suspend Audible Alarms	Off, On (with a time value)	NIBP Format	SD, SD(m), sd(M)
Alarm Tone	Low, Medium, High	NIBP Units	mmHg, kPa
ECG		Smartcuf (available in 2006)	Off, On
Resp Monitoring	Off, On	Timings	
ECG Bandwidth	Monitor, Extended	Back Light Time Out (Min)	2, 5, 10, 15, 30, On, Off
Power Source Filter	60 Hz, 50 Hz, Off	Display Time Out (Min)	2, 5, 10, 15, 30, On
Pacer Indicator	Off, On	Demo Mode	Disabled, Low, High

To Access the Setup Menus

From any main display screen (such as Large Numerics, Dual Waveform...):





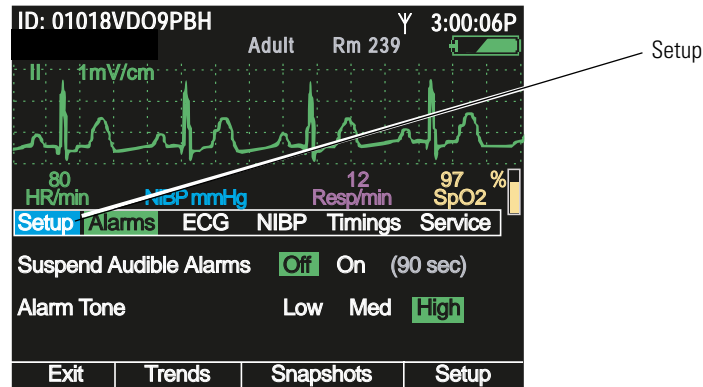
1. Highlight , **HR/PR**, **SpO₂**, **NIBP**, **Resp**, or .
2. Press .
3. Highlight **Setup** (at the bottom of the screen) and press .

Figure 29. Setup Menus



Note If you change parameter settings and then change the patient mode (from adult to pediatric, for example):

- all parameters are reset to the configuration default values for the new patient mode
- all stored patient data is lost



WARNING The Setup menus are also used to access the Service menu. Do not enter the Service menu unless you are a qualified service person.

About Monitor Information Screens

Both the start-up information screen and the monitoring information screen provide information about the monitor.

To View the Start Up Information Screen

From the power-on screen (Figure 7 on page 14), highlight **Info**.


Figure 30. Start-Up Information

Welch Allyn Propaq 802LTRN Serial# F82C0DD5 V1.00.00			Welch Allyn Propaq 802LT0N Serial# AB72383-1 V1.00.00		
Portland Westside Emergency Department PtidWstsdED10Jun05.mnt Ann Jones, MD 503-530-0101 x9999 Patient Mode Adult Snapshots none saved Wireless Communications Enabled			Portland Westside Emergency Department PtidWstsdED10Jun05.mnt Ann Jones, MD 503-530-0101 x9999 Patient Mode Adult Snapshots 14 of 20 saved Wireless Communications Disabled		
Start New Patient	Info	Demo	Start New Patient	Continue Patient	Info Demo

The start-up information screen provides the following:

- Monitor type (LTRN=wireless, LT0N=standalone), serial #, and software version # (V X.XX.XX)
- Medical facility name and department
- Configuration file name
- Contact person's name and telephone number
- Current patient mode (Adult, Pediatric, Neonate)
- Number of data snapshots saved (0 - 20)
- Network communications status (Enabled, Disabled)

To exit the start-up information screen, do one of the following:

- Highlight **Continue Patient** or **Start New Patient** to start monitoring.
- Highlight **Demo** to enter Demo mode.
- Press  to turn off the monitor.

To View the Monitoring Information Screen


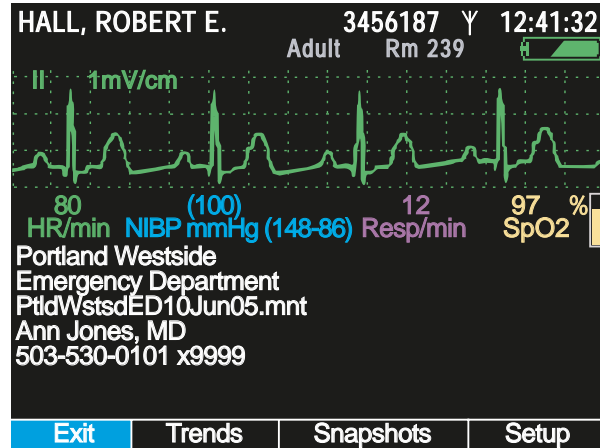
Highlight  (in the upper right corner of the vital-signs display) and press .






Figure 31. Monitoring Information



The monitoring information screen provides the following information:

- Continuous numeric and waveform display of patient vital signs
- Medical facility name and unit
- Configuration file name.
- Contact person's name and telephone number

To exit the monitoring information screen, do one of the following:

- To return to the primary display, press , or highlight **Exit** and press .
- To see a tabular display of vital signs, highlight **Trends** and press .
- To view saved snapshots of vital signs, highlight **Snapshots** and press .
- To view the Setup menu, highlight **Setup** and press .
- To turn off the monitor, press .

Using Demo Mode

In Demo mode, the monitor displays simulated patient data for all vital signs. You can use Demo mode to practice taking vital-signs measurements, modifying alarm limits and other settings, cycling through display formats, and responding to alarm conditions.

To start Demo mode, all of the following must be true:

- The power-on screen is displayed.
- The monitor is not in NIBP Auto mode.
- Patient data was deleted when the monitor was last shut down; that is, the monitor contains no stored patient data.
- The SpO₂ and ECG cables are not connected to the monitor.

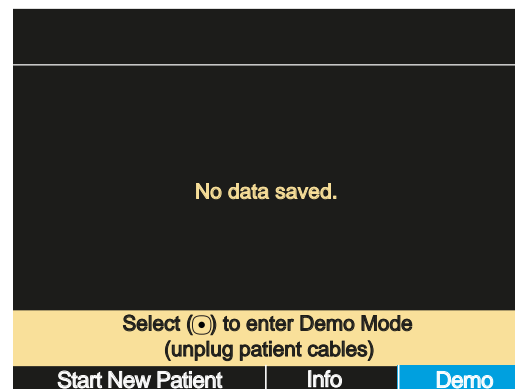
To Enter Demo Mode Low

1. Verify that the SpO₂ and ECG cables are not connected to the monitor.
2. Cycle the monitor off (deleting any saved data) and then on again.
3. When the main screen appears, highlight **Demo** (Figure 32) and press **⊙**.

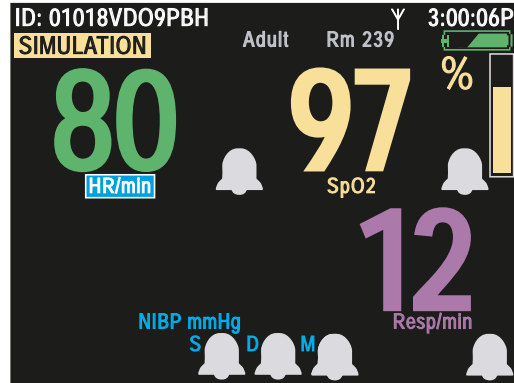
Note If you enter Demo mode with an SpO₂ or ECG cable connected, the monitor enters Demo mode for only a second or two before shutting down and powering up in monitor mode.

If you are in Demo mode and you connect an SpO₂ or ECG cable or select NIBP auto mode, the monitor shuts down and powers up to the start-up screen.

Figure 32. Power-On Screen: Demo Highlighted



Demo mode is indicated by the message 'SIMULATION' in the upper left corner of the screen (Figure 33). If the monitor is connected to Acuity, 'SIMULATION' also appears on the Acuity display.

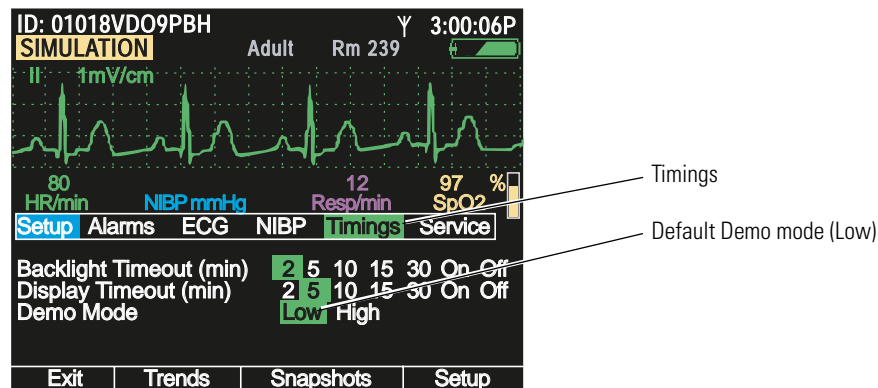
Figure 33. Demo Mode: Initial Display

When you enter Demo mode, the monitor is in 'Demo Mode Low'. The simulated vital signs of the patient are steady and do not cause any alarms at the default alarm limit settings. You can explore the monitor displays and menus, and you can change the same settings and values in Demo mode that you can change in normal mode.

In Demo Mode Low, if you adjust the alarm limits to put the simulated patient's vital signs out of limits, the monitor simulates an alarm condition. Another way to simulate an alarm condition is to switch the monitor to Demo Mode High, which uses higher numeric values.

To Switch to Demo Mode High

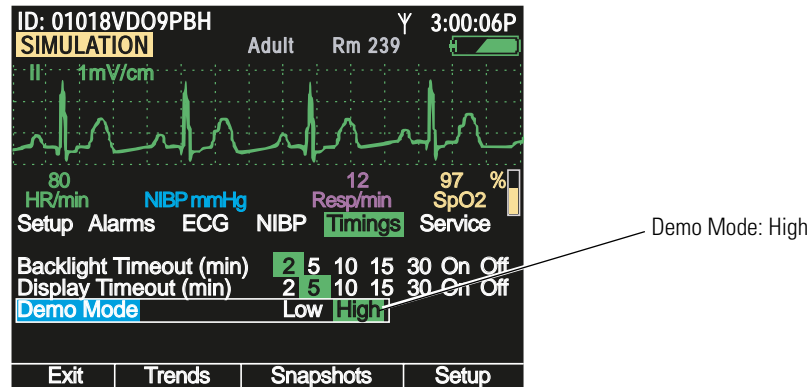
1. Access the **Setup** menu. (["To Access the Setup Menus"](#) on page 38.)
2. Press **▶** to highlight **Timings** (Figure 34).

Figure 34. Setup: Timings

The Timings menu specifies the Demo mode—**Demo Mode Low**, which simulates normal vital signs, and **Demo Mode High**, which simulates a higher heart rate (HR), higher respiration rate (Resp), and lower oxygen saturation (SpO₂).

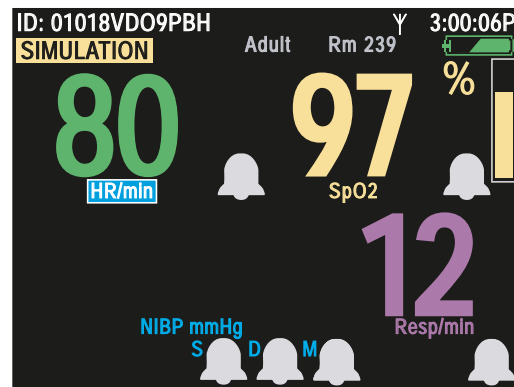
3. Press ▼ to highlight **Demo Mode**, and press ◀ or ▶ to highlight **High** (Figure 35).

Figure 35. Setup: Timings: Demo Mode High

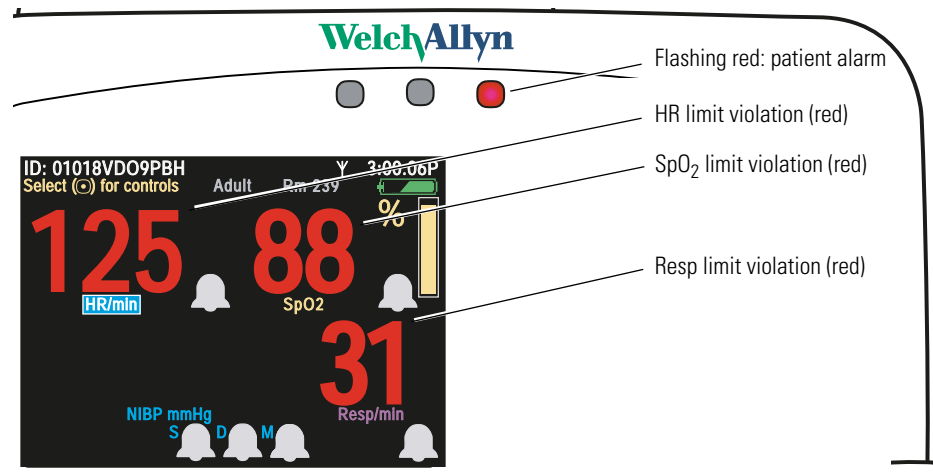


4. Press ○ or [Home] to return to the main display (Figure 36).

Figure 36. Demo Mode High: Initial Display



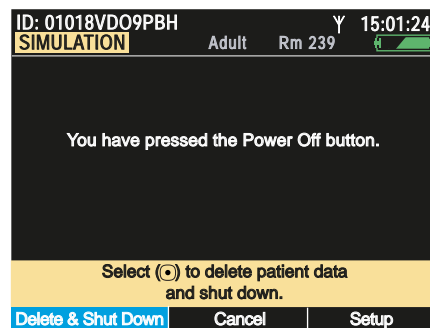
The monitor generates an alarm within seconds of reading this new set of simulated vital signs. The red alarm indicator (Figure 37) illuminates and flashes, the numerics for all violating vital signs—HR, SpO₂, and Resp—turn red and flash, and the highlight moves to the most recent alarming numeric.

Figure 37. Demo Mode High: Simulated Alarm Condition

With the monitor simulating an alarm, you can practice responding to alarms. (See “Responding to an Alarm” on page 90.)

To Exit Demo Mode

Press . The Demo Mode Power Off screen appears (Figure 38).

Figure 38. Demo Mode Power Off

- To shut down the monitor, press . (No data can be saved from Demo mode.)
- To resume Demo mode, highlight **Cancel** and press .
- To access the Setup menu, highlight **Setup** and press .

Power Saving

To maximize battery life, the monitor display shuts off when the following conditions are all true:

- No button press for a period of n seconds. (n is configurable.) See “[Timing Out the Display and the Back Light](#)” on page 23.
- No active alarms or alerts
- No Acuity Message window
- No Patient ID entry window

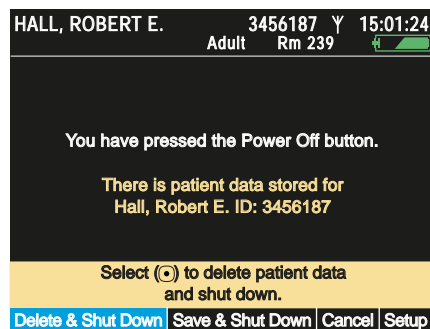
Turning Off the Monitor


To Turn Off the Monitor


Press .

The Power Off screen appears ([Figure 39](#)):

Figure 39. Power Off Screen



Highlight the desired action and press .

Note If you press  to power down before leaving the power-on screen ([Figure 7](#) on page 14), the monitor shuts down without presenting the screen shown above.

Communicating with an Acuity Central Station

See “[Monitoring in Communication with Acuity](#)” on page 77, and see *Acuity Directions for Use*.

About Error Detection

The monitor can detect conditions that prevent it from operating properly. If this occurs, it displays an error message and number. Follow the directions displayed on the screen.

Transporting the Monitor with the Patient

An ambulatory patient can wear or carry the monitor using the **Wearable Strap** or the **Patient Carry Strap** (optional accessories). Medical personnel can use the **Transport Stretcher Carry Strap** to keep the monitor with a patient during stretcher transport.



WARNING When the patient is wearing or carrying the monitor, carefully route any patient cabling to reduce the possibility of patient entanglement or strangulation. Use the supplied garment clips to secure the cable properly.

WARNING When positioning straps on the patient, make sure the straps do not entangle the patient's neck or cause choking.

WARNING Make sure the straps do not restrict the movement of the patient's limbs or create a hazard for the patient when the patient is walking or moving.

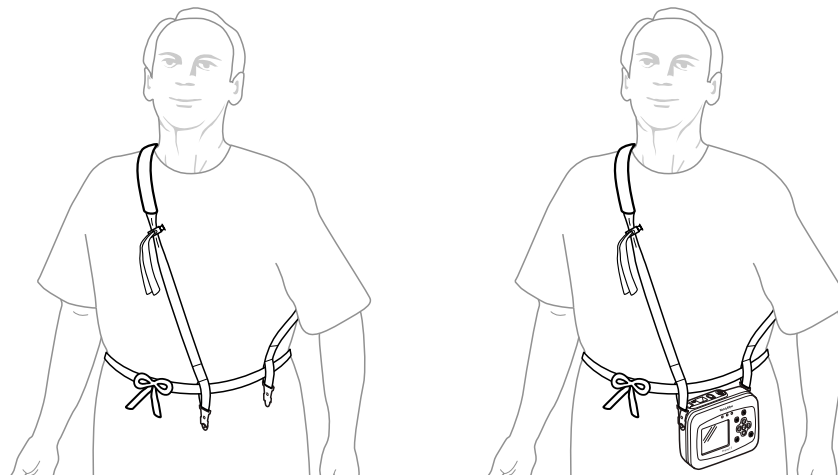
WARNING Never use a strap to carry or pick up both the monitor and the cradle. The straps are not intended to support, and cannot support, the combined weight of the monitor and the cradle.

To Attach the Wearable Strap



WARNING Do not put the wearable strap on the patient while the patient is in bed. The intended use of the wearable strap is to keep the monitor—**without the cradle**—with the patient when the patient is ambulatory.

Figure 40. Patient-Wearable Strap



1. Place the wearable strap on the sitting or standing patient and adjust all components for a comfortable, secure fit (Figure 40 left).
2. Connect the wearable strap securely to the monitor strap mounts (Figure 40 right).
3. Carefully arrange the strap and the monitor on the patient to avoid bruising or other skin injuries.

To Use the Patient Carry Strap (Figure 41)

WARNING Do not use the patient carry strap to lift or carry both the monitor and the cradle. The patient carry strap is not intended to support (and cannot support) the weight of both the monitor and the cradle. Attempting to carry both the monitor and the cradle with a patient carry strap could lead to patient injury and to damage to the monitor and the cradle.

1. Remove the monitor from the cradle.
2. Detach any monitor cables from such accessories as an IV pole.
3. Verify that all cables are disentangled from the bed and any bedside tables.
4. Connect the ends of the carry strap to the strap mounts on the monitor.

Figure 41. Patient Carry Strap**To Use the Transport Stretcher Carry Strap (Figure 42)**

1. With the monitor facing away from the stretcher and the patient, attach one end of the strap to a monitor strap mount.
2. Run the monitor strap under the stretcher restraint straps, near the patient's waist.
3. Attach the other end of the strap to the other strap mount.

Figure 42. Monitor Secured to the Patient During Stretcher Transport

4. Before transporting the patient, verify that all monitor cables are clear.

