



# X Series<sup>®</sup> Configuration Manual



Includes Real CPR Help<sup>®</sup> See-Thru CPR<sup>®</sup>

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# CHAPTER 1

## Introduction


This chapter provides an overview of the Setup, Parameter, and Supervisor Menus.

It includes the following sections:


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## Overview

The X Series<sup>®</sup> unit has many user accessible settings that allow you to configure the device according to your protocols and local requirements. This manual describes how to view and modify configuration settings.

 **Note:** Your unit only contains the features you have purchased. It may not contain all of the features listed in this manual.

You can view and modify configuration settings through the **Setup**, **Parameter**, and **Supervisor** menus. The Setup and Parameter menus are available to all users, while the Supervisor menu is restricted to authorized users and requires a passcode for entry. The Setup menu allows you to change configuration settings such as display, printer, and trends. The Parameter menus allow you to change current configuration settings such as NIBP and SpO<sub>2</sub>. The Supervisor menu allows you to configure default settings such as alarms, NIBP, and Defib/Pacer.

 **Note:** The X Series unit ships from ZOLL<sup>®</sup> with both the default supervisor passcode and the service passcode set to 1234. ZOLL strongly recommends changing both passcodes when you receive the unit.

The Parameter menus share many of the same settings as the Supervisor menu. If the shared settings have been configured in the Supervisor menu, they can be modified in the Parameter menus, but they will default back to the Supervisor settings once the unit is turned off for two minutes.

The Setup, Parameter, and Supervisor menus are described in detail in separate chapters of this manual. These chapters contain information on how to access the menus as well as the settings that are contained in each menu and their default values.

The following sections contain a general overview of the settings that can be accessed and modified in these menus. Each of these menus has a separate chapter in this manual that includes all the settings and their default values.

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## Setup Menu

The Setup menu allows you to view and modify parameters for the following features:

- **ECG** – The basic ECG settings, which include Filter Response, Heart Rate/Pulse Rate Tone, and Respiration Monitoring.
- **NIBP** – The basic NIBP settings, which consist of the NIBP Cuff Inflation Target Pressure.
- **Display/Volume** – The basic visual settings and volume, which include Display Brightness and Heart Rate/Pulse Rate Tone.
- **Printer** – The basic printer settings, which include Print Speed, Print Grid, and Print on Snapshot.
- **Trends** – The basic trend settings, which include Trend Display Format, logging trends in response to Interval, and logging trends in response to Alarms.
- **Operational Tests** – The operational tests, which include a Keypad Test, LED Test, and LCD Test.
- **Device Info** – The technical information, which includes Application Version, Serial Number, and Unit ID. In addition, from the Device Info menu, you can transmit or print the results of the most recent device readiness test.

## Parameter Menus

The Parameter menus allow you to view and modify parameters for the following features:

- **HR/PR Settings** – The heart monitoring protocols, which include HR/PR Alarm, LTA Monitor, and Extreme Brady/Tachy Alarm.
- **NIBP Settings** – The noninvasive blood pressure monitoring protocols, which include NIBP Systolic Alarm, NIBP Diastolic Alarm, NIBP MAP Alarm.
- **Resp Settings** – The respiration monitoring protocols, which include RR/BR Alarm, No Breath Alarm, and Respiration Monitoring.
- **SpO2 Settings** – The pulse CO-oximetry monitoring protocols, which include SpO2 Alarm and HR/PR Tone.
- **Temp Settings** – The temperature monitoring protocols, which include the alarm for channel 1, the alarm for channel 2, and the alarm for the difference between the two channels.
- **IBP1 Settings** – The invasive blood pressure monitoring protocols for the first channel, which include Systolic Pressure Alarm, Diastolic Pressure Alarm, and Mean Pressure Alarm.
- **IBP2 Settings** – The invasive blood pressure monitoring protocols for the second channel, which include Systolic Pressure Alarm, Diastolic Pressure Alarm, and Mean Pressure Alarm.
- **IBP3 Settings** – The invasive blood pressure monitoring protocols for the third channel, which include Systolic Pressure Alarm, Diastolic Pressure Alarm, and Mean Pressure Alarm.

## Supervisor Menu

The Supervisor menu allows you to view and modify the default technical settings of the unit. Access to the Supervisor menu is passcode-protected and allows only authorized users to view and modify the configuration settings. The Supervisor menu allows authorized users to view and modify the following features:

- **Alarms Settings**  
Enable or disable alarms on the unit and specify the alarm limits.
- **Log Settings**  
The Data recording settings, which includes Treatment Buttons and Waveform Recording.
- **Defib/Pacer Settings**  
The defibrillation and pacer settings, which include external and internal paddle energy settings and Default Pacer Mode.
- **ECG Settings**  
The ECG settings, which include AC Mains Filter and 12-Lead ECG.
- **NIBP Settings**  
NIBP settings include Default NIBP Mode, Default Auto Mode Interval, and default cuff inflation target pressures.
- **Printer Settings**  
Printer settings include Print on Defib/Pacer Events, Print on Event, and Print on Treatment Snapshot.
- **Display/Configuration Settings**  
Display settings include language, unit settings, and color settings.
- **AED Settings**  
The AED settings, which include voice prompts, CPR time, and energy protocols
- **CPR Settings**  
The CPR settings, which include CPR Time, Enable Metronome, and Enable CPR Prompts.
- **Communications Settings**  
Communications settings include Wireless, Bluetooth, and Wi-Fi communication.

- **Ventilation Feedback**
- **Clinical Dashboards**

Clinical dashboard settings include enabling/disabling and configuring the TBI Dashboard.

- **Service Settings**

Technical maintenance settings include Device Tests, software updates, upgrades, diagnostics.

## Exporting and Importing Configuration Settings

You can use a USB device to export and import a configuration file that contains system and patient setup information. Once a configuration file is exported to a USB device, it can be imported to other X Series units.

If you are planning on exporting a configuration to multiple units, perform the export operation with a unit that has the most features or options. Otherwise, you may inadvertently modify configuration settings on the units that receive the imported file. For example, if you export a configuration file from a unit that does not have SpO<sub>2</sub> or NIBP options and import that file to a unit that does have SpO<sub>2</sub> and NIBP, the configuration settings for those options may revert to the default settings.

### Exporting Configuration Information to USB

Exporting a configuration file exports the system and patient setup information to a file named ZollConfig.xml.



**Note:** If you currently have a file named ZollConfig.xml on the USB device, this procedure will cause the file to be overwritten.

Follow these steps to export a configuration to a USB device:

1. Insert the USB device into the X Series unit.
2. Press the **More** (≡) and **Setup** (⚙️) quick access keys, and select **Supervisor>Display/Configuration**.
3. Select **Exporting to USB**. The message *DO NOT DISCONNECT THE USB* displays.
4. When the export is complete, the message *EXPORT IS COMPLETE. YOU MAY NOW REMOVE THE USB DRIVE* displays.
5. Press **OK**.




**Caution:** Apply an adhesive label to the USB device to clearly identify the configuration settings you have exported.





**Note:** If you make any changes to the configuration file you have just exported, you will not be able to import the file to another X Series unit.


## Importing Configuration Information from USB

Importing a configuration file imports the system and patient setup information from a file named ZollConfig.xml on the USB device.

 **Note:** Make sure the file you are importing is named ZollConfig.xml. Otherwise, the import will not work.

Follow these steps to import a configuration from a USB device:

1. Insert the USB device into the X Series unit, and turn it on.
2. Press the **More** () and **Setup** () quick access keys, and select **Supervisor>Display/Configuration**.
3. Select **Importing from USB**. The message *OPERATION WILL OVERWRITE SYSTEM CONFIGURATIONS AND ALARM SETTINGS. ARE YOU SURE?* displays.
4. Press **YES** to complete the import process. The message *DO NOT DISCONNECT THE USB* displays. When the import is complete, the message *IMPORT IS COMPLETE. YOU MAY NOW REMOVE THE USB DRIVE. THE DEVICE WILL AUTOMATICALLY RESET AFTER PRESSING THE "OK" BUTTON* displays.
5. Press **OK**.

 **Note:** Review critical configuration values such as alarm, AED, defibrillator, and pacemaker settings to verify that you imported the correct configuration file.

## Export/Import System Messages

When exporting and importing system and patient information, the X Series unit may display the following error messages:



<b>System Message</b>	<b>Cause/Action</b>
<i>CONFIGURATION FILE NOT FOUND</i>	The configuration file (ZollConfig.xml) was not found on the USB device. Ensure that the connected USB device contains the configuration file. If required, generate a configuration file using the Export operation.
<i>EXPORT OPERATION FAILED</i>	An internal error occurred during the export process. Try repeating the export operation. If failure occurs again, try a different USB drive.
<i>IMPORT OPERATION FAILED</i> <i>INVALID CONFIGURATION FILE</i>	If the USB device is not new, retry the export and then retry the import operation.  If the USB device is new and has not been formatted, reformat the device by selecting the FAT32 File System, changing the Allocation unit size to Default, and choosing the Quick Format option. Retry import operation.
<i>IMPORT OPERATION FAILED</i> <i>A RESTORE ALL TO FACTORY DEFAULTS HAS BEEN PERFORMED</i>	During the import process an unexpected failure occurred. All system and patient parameters have been restored to factory defaults. Retry import operation.
<i>INCOMPATIBLE CONFIGURATION FILE</i>	The device that exported the configuration file is not compatible with the device that is importing the file. This is caused by incompatible software releases. Contact the ZOLL Technical Service Department to update the earlier software version.
<i>INSUFFICIENT SPACE ON USB DRIVE</i>	The USB device did not have enough space to save the configuration file. The configuration file requires at least 1MB of free space.
<i>INVALID USB DRIVE CONNECTED</i>	The USB device connected was not recognized. Try a different USB device.
<i>NO USB DRIVE INSERTED</i>	No USB device was inserted in the side panel. Insert USB drive and retry.

## Restoring Factory Default Configuration Settings

You can restore all the current configuration settings to their factory default settings. However, if the language is different than the default setting, it will not change.

 **Note:** You must have authorized supervisor access to restore the factory default settings.

### Restoring Default Values

1. Press the **More** () and **Setup** () quick access keys, and select **Supervisor**.
2. Enter the Supervisor passcode and select **Display/Configuration**.
3. Use the navigation keys to select **Restore All Factory Defaults**.



## Configuration Manual Updates









An issue or revision date for this manual is shown on the front cover. If more than three years have elapsed since this date, contact ZOLL Medical Corporation to determine if additional product information updates are available.

All users should carefully review each manual update to understand its significance and then file it in its appropriate section within this manual for subsequent reference.

Product documentation is available through the ZOLL website at [www.zoll.com](http://www.zoll.com). From the Products menu, choose **Product Manuals**.

### Symbols

The following symbols are used in this manual:


Symbol	Description
	Attention, consult accompanying documents
	Manufacturer.
	Authorized representative in the European Community
	Catalogue number
	Indicates a carrier that contains Unique Device Identifier information.
	Indicates the item is a medical device.
	Indicates the entity importing the medical device into the locale.
	Conformité Européenne Complies with medical device directive 93/42/EEC.


## Conventions

This guide uses the following conventions:

Within text, the names and labels for physical buttons and soft keys appear in **boldface** type (for example, “Press the **OK** button”).

This guide uses uppercase italics for audible prompts and for text messages displayed on the screen (for example, *CONFIGURATION FILE NOT FOUND*).

 **WARNING!** Warning statements alert you to conditions or actions that can result in personal injury or death.

 **Caution:** Caution statements alert you to conditions or actions that can result in damage to the unit.

# CHAPTER 2



## Setup Menu

This chapter describes the configuration settings you can modify in the Setup menu.

It includes the following sections:

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## Accessing the Setup Menu

All users can access the Setup menu, which allows you to view and modify basic settings of the unit. Access the Setup menu by pressing the **More**  and **Setup**  quick access keys. Use the navigation keys to highlight and select the appropriate parameters in the menu.

The Setup Menu includes the following parameters:

- "ECG Monitoring Parameters" on the facing page
- "NIBP Monitoring Parameters" on page 15
- "Display/Volume Parameters" on page 16
- "Printer Parameters" on page 17
- "Trends Parameters" on page 19
- "Operational Tests" on page 21
- "Device Info" on page 22

## ECG Monitoring Parameters

ECG monitoring parameters allow you to view and modify functions related to using the unit's ECG monitoring function. These parameters include:

- Filter Response
- HR/PR Tone
- Resp Monitoring
- Resp Lead
- Patient Pace Marker
- Patient Pace Speed
- ECG Sweep Speed

### Filter Response

The Filter Response parameter allows you to specify the ECG bandwidth filter.

The values for the Filter Response parameter are:

<b>Possible Values</b>	Limited, Monitor
<b>Default</b>	Monitor

Limited: 0.67-20 Hz

Monitor: 0.67-40 Hz

### HR/PR Tone

The HR/PR Tone parameter allows you to enable or disable the heart rate and pulse rate tone on the unit.

The values for the HR/PR Tone parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## Resp Monitoring

The Resp Monitoring parameter allows you to enable or disable the respiration monitoring program.

The values for the Resp Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## Resp Lead

The Resp Lead parameter allows you to set which electrode the unit monitors as its respiration lead.

The values for the Resp Lead parameter are:


<b>Possible Values</b>	Lead I (RA-LA), Lead II (RA-LL)
<b>Default</b>	Lead II (RA-LL)

## Patient Pace Marker

The Patient Pace Marker parameter allows you to enable or disable the patient Pace Marker.

The values for the Patient Pace Marker parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

When you select **Off**, the Pacer Off Indicator () icon appears in the top ECG trace on the Display Screen to indicate the pacer indicator is off. If the patient has a cardiac pacemaker the Paced Indicator should be set to **On** indicating that pace pulse detection is On.

## ECG Sweep Speed

The ECG Sweep Speed parameter allows you to set the ECG sweep speed.

The values for the ECG Sweep Speed parameter are:

<b>Possible Values</b>	25 mm/s, 50 mm/s
<b>Default</b>	25 mm/s

## NIBP Monitoring Parameters

NIBP monitoring parameters allow you to view and modify the NIBP settings of the X Series unit. These parameters include NIBP Cuff Inflation Target.

### NIBP Cuff Inflation Target

The NIBP Cuff Inflation Target parameter allows you to select the default cuff inflation target pressure when you select NIBP monitoring.

The values for the NIBP Cuff Inflation Target parameter are:

<b>Possible Values</b>	Adult: 120, 140, 160, 180, 200, 220, 240, 260 Pediatric: 80, 90, 100, 110, 120, 130, 140, 150 Neonate: 60, 70, 80, 90, 100, 110, 120, 130
<b>Default</b>	Adult: 160 Pediatric: 120 Neonate: 90

## Display/Volume Parameters

The Display/Volume parameters allow you to view and modify the visual and audio settings for the unit. These parameters include:

- Display Brightness
- HR/PR Tone
- Volume

### Display Brightness

The Display Brightness parameter allows you to set the brightness level for the monitor display.

The values for the Display Brightness parameter are:

<b>Possible Values</b>	10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%
<b>Default</b>	70%

### HR/PR Tone

The HR/PR Tone parameter allows you to enable or disable the heart rate and pulse rate tone on the unit.

The values for the HR/PR Tone parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

### Volume

The Volume parameter allows you to set the volume level for the X Series unit and audio prompts.

The values for the Volume parameter are:

<b>Possible Values</b>	Low, Medium, High
<b>Default</b>	Medium

 **WARNING!** Do not adjust the alarm signal volume lower than the ambient noise level as this may impede operator recognition of alarm signals.



## Printer Parameters

The Printer parameters allow you to view and modify settings related to the printing of recorded data. These parameters include:

- Print Speed
- Print Number of Traces
- Print Grid
- Print on Snapshot
- Print on Patient Alarm
- Print on NIBP
- Print on Trend

### Print Speed

The Print Speed parameter allows you to select how fast data is printed.

The values for the Print Speed parameter are:

<b>Possible Values</b>	25 mm/s, 50 mm/s
<b>Default</b>	25 mm/s

### Print Number of Traces

The Print Number of Traces parameter allows you to set how many traces are printed.

The values for the Print Number of Traces parameter are:

<b>Possible Values</b>	1, 2, 3, 4
<b>Default</b>	3

### Print Grid

The Print Grid parameter allows you to specify that the data is printed on a grid.

The values for the Print Grid parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## Print on Snapshot

The Print on Snapshot parameter allows you to enable or disable the printing of snapshots.

The values for the Print on Snapshot parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Print on Patient Alarm

The Print on Patient Alarm parameter allows you to determine whether or not to print each time an alarm occurs.

The values for the Print on Patient Alarm parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Print on NIBP

The Print on NIBP parameter allows you to determine whether or not to print NIBP measurements each time the unit takes them.

The values for the Print on NIBP parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Print on Trend

The Print on Trend parameter allows you to determine whether or not to print trend values each time the unit takes a trend data snapshot.

The values for the Print on Trend parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Trends Parameters

The Trends parameters allow you to view and modify settings related to trend information and all monitored vital sign measurements. These parameters include:

- Trend Display Format
- Trend Display Interval
- Trend on Alarm

### Trend Display Format

The Trend Display Format parameter allows you to specify what vital sign measurements appear on the Trends status monitor.

The values for the Trend Display Format parameter are:

<b>Possible Values</b>	Resp, SpO <sub>2</sub> , Temp, P1, P2, P3, NIBP
<b>Default</b>	NIBP

- **Resp** Displays the following vital signs: HR, SpO<sub>2</sub>, RR, EtCO<sub>2</sub>, FiCO<sub>2</sub>
- **SpO<sub>2</sub>** Displays the following vital signs: HR, SpO<sub>2</sub>, SpCO<sup>®</sup>, SpMet<sup>®</sup>
- **SpHb** Displays the following vital signs: HR, SpO<sub>2</sub>, SpHb, SpOC, PVI
- **Temp** Displays the following vital signs: HR, SpO<sub>2</sub>, T1, T2, ΔT
- **P1** Displays the following vital signs: HR, SpO<sub>2</sub>, IBP1, RR
- **P2** Displays the following vital signs: HR, SpO<sub>2</sub>, IBP2, RR
- **P3** Displays the following vital signs: HR, SpO<sub>2</sub>, IBP3, RR
- **NIBP** Displays the following vital signs: HR, SpO<sub>2</sub>, NIBP, RR

### Trend Display Interval

The Trend Display Interval parameter allows you to specify the time interval to display trends.

The values for the Trend Display Interval parameter are:

<b>Possible Values</b>	30 sec, 1 min, 5 min, 10 min, 15 min, 30 min, 60 min
<b>Default</b>	5 min

### Trend on Alarm

The Trend on Alarm parameter allows you to specify whether or not to log Trends each time an alarm occurs.

The values for the Trend on Alarm parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Operational Tests

The Operational Tests allow you to ensure that the X Series unit is operating at optimal efficiency, and include:

- Keypad Test
- LED Test
- LCD Test
- RFU Indicator Test
- Audio Test
- Printer Test

## Device Info


The Device Info screen displays specific technical information about the X Series unit, such as:

- Application Version
- Serial Number
- Unit ID
- Department Name
- Contact Telephone

## Readiness Test Log Review

In addition to displaying technical information, the Device Info screen allows you to print or transmit the Readiness Test logs to a Defib Dashboard server. The X Series unit performs a readiness test when the unit is turned on. The test verifies that the unit is ready in the event of a code.

To transmit or print a Readiness Test log:

1. Access the Setup menu by pressing the **Setup** () quick access key then use the navigation keys to highlight and select **Device Info**. The Device Info screen displays.
2. Select **Readiness Test Logs Review** button. The Readiness Test Logs Review screen displays with a list of up to 20 of the most recent Readiness Logs.
3. Select a Readiness Test log to transmit or print by navigating to and selecting a log from the list. A green check box indicates a selected log.



**Note:** You can only select one log at a time to print or transmit.

4. If you would like to transmit the log to the configured server, select the **Transmit** button. The X Series unit begins transmission of the selected log. See "Device Info" above
5. If you would like to print the log, select the **Print** button. The X Series unit begins printing the currently selected log.

# CHAPTER 3

## Parameter Menus


This chapter describes the configuration settings you can modify in the Parameter Menus.

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## Accessing the Parameter Menus

All users can access the Parameter menus, which allow you to modify the monitoring protocols of the unit. The Parameter menus share many of the same settings as the Supervisor menu. If the shared settings have been configured in the Supervisor menu, they can be modified in the Parameter menus, but they will default back to the Supervisor settings once the unit is turned off for two minutes.

You can access these menus in the monitoring window by pressing the **Display/Home** button (  ) and then use the navigation keys to highlight and select the appropriate settings in the menus.

The Parameter menus include the following parameters:

- "HR/PR Parameter Settings" on the facing page
- "NIBP Parameter Settings" on page 28
- "Resp Parameter Settings" on page 34
- "SpO2 Parameter Settings" on page 38
- "Temp Parameter Settings" on page 51
- "IBP1 Parameter Settings" on page 55
- "IBP2 Parameter Settings" on page 60
- "IBP3 Parameter Settings" on page 65



## HR/PR Parameter Settings

The HR/PR parameter settings allow you to view and modify functions related to using the unit to monitor heart rate. These parameters include:

- HR/PR
- Extreme Brady/Tachy Alarms
- LTA (Life Threatening Alarms) Monitoring
- HR/PR Tone
- HR/PR Selected Source
- Current Source
- ECG Sweep Speed

### HR/PR Alarm

The following options allow you to set the limits of the heart rate/pulse rate alarm for all patient age groups.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the HR/PR alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the HR/PR alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the HR/PR alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	32-300
<b>Default</b>	Adult: 120 Pediatric: 150 Neonate: 200

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the HR/PR alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	30-298
<b>Default</b>	Adult: 50 Pediatric: 50 Neonate: 100

### Extreme Brady/Tachy Alarms

If LTA monitoring is enabled, the Extreme Brady/Tachy Alarms parameter allows you to set the limits of the Extreme Brady/Tachy alarms.

The values for the Extreme Brady/Tachy Alarm parameter are:

<b>Possible Values</b>	Tachy: +5-+30 by 5's Brady: -5--30 by 5's
<b>Default</b>	Tachy: +20 Brady: -10

### LTA Monitoring

The LTA Monitoring parameter allows you to enable or disable LTA monitoring.

The values for the LTA Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## HR/PR Tone

The HR/PR Tone parameter allows you to enable or disable the HR/PR tone.

The values for the HR/PR Tone parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## HR/PR Selected Source

The HR/PR Selected Source parameter allows you to specify the HR/PR source.

The values for the HR/PR Selected Source parameter are:

<b>Possible Values</b>	ECG, SpO2, P1, P2, P3
<b>Default</b>	ECG

## ECG Sweep Speed

The ECG Sweep Speed parameter allows you to set the ECG sweep speed.

The values for the ECG Sweep Speed parameter are:

<b>Possible Values</b>	25 mm/s, 50 mm/s
<b>Default</b>	25 mm/s

## NIBP Parameter Settings

The NIBP parameter settings allow you to view and modify functions related to using the unit for NIBP monitoring, and includes:

- NIBP Systolic Alarm
- NIBP Diastolic Alarm
- NIBP MAP Alarm
- NIBP Mode
- NIBP Auto Mode Interval
- SmartCuf On/Off

### NIBP Systolic Alarm

The following options allow you to set the limits of the NIBP Systolic Alarm for all patient age groups.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the NIBP systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the NIBP systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

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### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the NIBP systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	Adult: 32-260 Pediatric: 32-160 Neonate: 22-120
<b>Default</b>	Adult: 220 Pediatric: 145 Neonate: 100

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the NIBP systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	Adult: 30-258 Pediatric: 30-158 Neonate: 20-118
<b>Default</b>	Adult: 75 Pediatric: 75 Neonate: 50

## NIBP Diastolic Alarm

The following options allow you to set the limits of the NIBP Diastolic alarm for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the NIBP diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the NIBP diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the NIBP diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	Adult: 22-220 Pediatric: 22-130 Neonate: 12-110
<b>Default</b>	Adult: 110 Pediatric: 100 Neonate:70

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the NIBP diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	Adult: 20-218 Pediatric: 20-128
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	Neonate: 10-108
<b>Default</b>	Adult: 35 Pediatric: 35 Neonate: 30

## NIBP MAP Alarm

The following options allow you to set the limits of the NIBP MAP alarm for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the NIBP MAP alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the NIBP MAP alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the NIBP MAP alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	Adult: 25-23 Pediatric: 25-140 Neonate: 15-110
<b>Default</b>	Adult: 120 Pediatric: 110 Neonate: 80

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the NIBP MAP alarm.

The values for the Lower Limit parameter are:


<b>Possible Values</b>	Adult: 23-228 Pediatric: 23-138 Neonate: 13-108
<b>Default</b>	Adult: 50 Pediatric: 35 Neonate: 35

### NIBP Mode

The NIBP Mode parameter allows you to set the NIBP Mode.

The values for the NIBP Mode parameter are:

<b>Possible Values</b>	Manual, Auto
<b>Default</b>	Manual

- **Manual:** Unit takes a single NIBP measurement when you press the **NIBP** button () on the front panel. To repeat, press the **NIBP** key again.
- **Auto:** Unit takes the first of a series of NIBP measurements when the **NIBP Auto Mode Interval** timer expires, and then repeats the NIBP measurement at this specified interval.

### NIBP Auto Mode Interval

If Auto Mode is selected, the NIBP Auto Mode Interval parameter allows you to set the interval time.

The values for the NIBP Auto Mode Interval parameter are:



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<b>Possible Values</b>	1 min, 2 min, 3 min, 5 min, 10 min, 15 min, 30 min, 60 min
<b>Default</b>	5 min

## SmartCuf On/Off

The SmartCuf On/Off parameter allows you to enable or disable SmartCuf.

The values for the SmartCuf On/Off parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## Resp Parameter Settings

The Resp parameter settings allow you to view and modify functions related to using the X Series unit for respiration monitoring, and include:

- RR/BR Alarm
- No Breath Alarm
- Resp Monitoring
- Resp Lead
- CO2/Resp Sweep Speed

### RR/BR Alarm

The following options allow you to set the limits of the Respiration Rate alarm for all patient age groups.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the RR\_BR alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the RR\_BR alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Upper Limit

The Upper Limit parameter allows you to set the upper limit for the RR\_BR alarm.

The values for the Upper Limit are:

<b>Possible Values</b>	5-150
<b>Default</b>	Adult: 50 Pediatric: 50 Neonate: 80

## Lower Limit

The Lower Limit parameter allows you to set the lower limit for the RR\_BR alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-145
<b>Default</b>	Adult: 3 Pediatric: 3 Neonate: 12

## No Breath Alarm

The No Breath Alarm parameter allows you to set the time of the No Breath alarm for all patient age groups.

The values for the No Breath Alarm parameter are:

<b>Possible Values</b>	Adult: Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec Pediatric: Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec Neonate: Off, 10 sec, 15 sec, 20 sec
<b>Default</b>	Adult: Off Pediatric: Off Neonate: Off

## Resp Monitoring

The Resp Monitoring parameter allows you to enable or disable Resp monitoring.

The values for the Resp Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## Resp Lead

The Resp Lead parameter allows you to specify the Lead cable used for Resp monitoring.

The values for the Resp Lead parameter are:

<b>Possible Values</b>	Lead I (RA-LA), Lead II (RA-LL)
<b>Default</b>	Lead II (RA-LL)

## CO<sub>2</sub>/Resp Sweep Speed

The CO<sub>2</sub>/Resp Sweep Speed parameter allows you to set the CO<sub>2</sub>/Resp sweep speed.

The values for the CO<sub>2</sub>/Resp Sweep Speed parameter are:

<b>Possible Values</b>	3.13 mm/s, 6.25 mm/s, 12.5 mm/s
<b>Default</b>	12.5 mm/s

## SpO2 Parameter Settings

The SpO2 parameter settings allow you to view and modify functions related to Pulse CO-Oximetry monitoring, and include:

- SpO2 Alarm
- SpCO Alarm
- SpMet Alarm
- SpHb Alarm
- SpOC Alarm
- PVI Alarm
- PI Alarm
- SpCO Monitoring
- SpMet Monitoring
- SpHb Monitoring
- SpOC Monitoring
- PVI Monitoring
- PI Monitoring
- Averaging Time
- Sensitivity
- HR/PR Tone

## SpO2 Alarm

The following options allow you to set the limits of the SpO2 alarm for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpO2 alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpO2 alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the SpO2 alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	52-100
<b>Default</b>	Adult: 100 Pediatric: 100 Neonate: 95

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the SpO2 alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	50-98
<b>Default</b>	85

## SpCO Alarm

The following options allow you to set the limits of the SpCO alarm (if enabled) for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpCO alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpCO alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the SpCO alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2-100
<b>Default</b>	Adult: 10 Pediatric: 10 Neonate: 10



**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the SpCO alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-98
<b>Default</b>	Adult: 0 Pediatric: 0 Neonate: 0

**SpMet Alarm**

The following options allow you to set the limits of the SpMet alarm (if enabled) for all patient age groups.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpMet alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpMet alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the SpMet alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0-100.0
<b>Default</b>	Adult: 3.0 Pediatric: 3.0 Neonate: 3.0

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the SpMet alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0-98.0
<b>Default</b>	Adult: 0.0 Pediatric: 0.0 Neonate: 0.0

## SpHb Alarm

The following options allow you to set the limits of the SpHb alarm (if enabled) for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpHb alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpHb alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the SpHb alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	gdL: 2 to 25 mmol/L: 2 to 15.5
<b>Default</b>	Adult: 17.0 gdL 11.0 mmol/L Pediatric: 17.0 gdL 11.0 mmol/L Neonate: 17.0 gdL 11.0 mmol/L

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the SpHb alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	gdL: 0 to 24.9 mmol/L: 0 to 15.4
<b>Default</b>	Adult: 7.0 gdL 4.0 mmol/L Pediatric: 7.0 gdL 4.0 mmol/L Neonate: 7.0 gdL 4.0 mmol/L

## SpOC Alarm

The following options allow you to set the limits of the SpOC alarm (if enabled) for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpOC alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpOC alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the SpOC alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.1 to 35 ml/dL
<b>Default</b>	Adult: 25 ml/dL Pediatric: 25 ml/dL Neonate: 25 ml/dL

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the SpOC alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 34.9 ml/dL
<b>Default</b>	Adult: 10 Pediatric: 10 Neonate: 10

**PVI Alarm**

The following options allow you to set the limits of the PVI alarm (if enabled) for all patient age groups.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the PVI alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the PVI alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the PVI alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2 to 100%
<b>Default</b>	40%

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the PVI alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 98%
<b>Default</b>	5%

**PI Alarm**

The following options allow you to set the limits of the PI alarm (if enabled) for all patient age groups.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the PI alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the PI alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the PI alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.2 to 20%
<b>Default</b>	Adult: 20% Pediatric: 20% Neonate: 20%

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the PI alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 19.8%
<b>Default</b>	Adult: 0% Pediatric: 0% Neonate: 0%

**SpCO Monitoring**

The SpCO Monitoring parameter allows you to enable or disable SpCO monitoring. SpCO monitoring is not available on units with the SpO2 Nellcor module installed.

The values for the SpCO Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**SpMet Monitoring**

The SpMet Monitoring parameter allows you to enable or disable SpMet monitoring. SpMet monitoring is not available on units with the SpO2 Nellcor module installed.

The values for the SpMet Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**SpHb Monitoring**

The SpHb Monitoring parameter allows you to enable or disable SpHb monitoring. SpHb monitoring is not available on units with the SpO2 Nellcor module installed.


The values for the SpHb Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off



## SpOC Monitoring

The SpOC Monitoring parameter allows you to enable or disable SpOC monitoring.

 **Note:** SpOC monitoring is only available when SpHb is installed.

The values for the SpOC Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## PVI Monitoring

The PVI Monitoring parameter allows you to enable or disable PVI monitoring.

The values for the PVI Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## PI Monitoring

The PI Monitoring parameter allows you to enable or disable PI monitoring.

The values for the PI Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Averaging Time

The Averaging Time parameter allows you to specify the SpO2 averaging time.

The values for the Averaging Time parameter are:

<b>Possible Values</b>	4 seconds, 8 seconds, 16 seconds
<b>Default</b>	8 seconds

## Sensitivity


The Sensitivity parameter allows you to specify the sensitivity level of the SpO2 monitoring.

The values for the Sensitivity parameter are:

<b>Possible Values</b>	Normal, Maximum
<b>Default</b>	Normal

## SpHb Venous Mode

The SpHb Venous Mode parameter allows you to specify whether to use venous mode as the blood sample source for SpHb measurements.

 **Note:** The X Series unit uses arterial mode when the SpHb Venous Mode parameter is set to **Off**.

The values for the Venous Mode parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## SpHb Averaging Time

The SpHb Averaging Time parameter allows you to choose the level of visibility to variations in SpHb values.

The values for the SpHb Averaging Time parameter are:

<b>Possible Values</b>	Short, Medium, Long
<b>Default</b>	Long

## HR/PR Tone

The HR/PR parameter allows you to enable or disable heart rate/pulse rate monitoring.

The values for the HR/PR Tone parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## Temp Parameter Settings

The Temp parameters allow you to view and modify functions related to using the X Series unit for temperature monitoring. These parameters include:

- T1 Alarm
- T2 Alarm
- $\Delta T$  Alarm
- T1 Source Label
- T2 Source Label

### T1 Alarm

The following options allow you to set the limits of the T1 alarm for all patient age groups.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the T1 alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the T1 alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the T1 alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the T1 alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
<b>Default</b>	°F: 95.0 °C: 35.0

**T2 Alarm**

The following options allow you to set the limits of the T2 alarm for all patient age groups.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the T2 alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the T2 alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the T2 alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the T2 alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
<b>Default</b>	°F: 95.0 °C: 35.0

 **$\Delta T$  Alarm**

The following options allow you to set the limits of the  $\Delta T$  Alarm for all patient age groups.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the  $\Delta T$  Alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the  $\Delta T$  Alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the  $\Delta T$  Alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 0.2-90.0 °C: 02-50.0
<b>Default</b>	°F: 5.0 °C: 2.8

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the  $\Delta T$  Alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 0.0-89.8 °C: 0.0-49.8
<b>Default</b>	°F: 0.0 °C: 0.0

### T1 Source Label

The T1 Source Label parameter allows you to specify the label for the T1 monitor.

The values for the T1 Source Label parameter are:

<b>Possible Values</b>	T1, ART, CORE, ESOPH, RECT, SKIN, VEN, NASO
<b>Default</b>	T1

### T2 Source Label

The T2 Source Label parameter allows you to specify the label for the T2 monitor.

The values for the T2 Source Label parameter are:

<b>Possible Values</b>	T2, ART, CORE, ESOPH, RECT, SKIN, VEN, NASO
<b>Default</b>	T2

## IBP1 Parameter Settings

The IBP1 parameter settings allow you to view and modify functions related to the first channel of the X Series unit for invasive blood pressure monitoring, and include:

- P1 Systolic Alarm
- P1 Diastolic Alarm
- P1 Mean Alarm
- Source Label
- Display Format

### P1 Systolic Alarm

The following options allow you to set the limits of the P1 Systolic alarm for all patient age groups.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P1 systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P1 systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the P1 systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 220 Pediatric: 145 Neonate: 100

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the P1 systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 75 Pediatric: 75 Neonate: 50

**P1 Diastolic Alarm**

The following options allow you to set the limits of the P1 Diastolic alarm for all patient age groups.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit of the NIBP diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off



### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit of the NIBP diastolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit of the NIBP diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 110 Pediatric:100 Neonate: 70

### Lower Limit

The Lower Limit parameter allows you to set the lower limit of the NIBP diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 35 Pediatric: 35 Neonate: 30

## P1 Mean Alarm

The following options allow you to set the limits of the P1 Mean alarm for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 120 Pediatric: 110 Neonate: 80

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 50 Pediatric: 50 Neonate: 35

**Source Label**

The Source Label parameter allows you to specify the label of the P1 channel.

The values for the Source Label parameter are:

<b>Possible Values</b>	P1, ABP, AO, ART, BAP, CVP, FAP, ICP, LAP, PAP, RAP, UAP, UVP
<b>Default</b>	P1

**Display Format**

The Display Format parameter allows you to specify whether to display MAP measurement (M) with or without the Systolic (S) and Diastolic (D) measurements.

The values for the Display Format parameter are:

<b>Possible Values</b>	S/D (M), S/D, (M) S/D, (M)
<b>Default</b>	S/D (M)

## IBP2 Parameter Settings

The IBP2 parameter settings allow you to view and modify functions related to the second channel of the X Series unit for invasive blood pressure monitoring, and include:

- P2 Systolic Alarm
- P2 Diastolic Alarm
- P2 Mean Alarm
- Source Label
- Display Format

### P2 Systolic Alarm

The following options allow you to set the limits of the P2 Systolic alarm for all patient age groups.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P2 systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P2 systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P2 systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 220 Pediatric: 145 Neonate: 100

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P2 systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 75 Pediatric: 75 Neonate: 50

## P2 Diastolic Alarm

The following options allow you to set the limits of the P2 Diastolic alarm for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P2 diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P2 diastolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Of

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit of the for the P2 diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 110 Pediatric: 100 Neonate: 70

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the P2 diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 35 Pediatric: 35 Neonate: 30

**P2 Mean Alarm**

The following options allow you to set the limits of the P2 Mean alarm for all patient age groups.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 120 Pediatric: 110 Neonate: 80

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 50 Pediatric: 50 Neonate: 35

### Source Label

The Source Label parameter allows you to specify the label of the P2 channel.

The values for the Source Label parameter are:

<b>Possible Values</b>	P2, ABP, AO, BAP, CVP, FAP, ICP, LAP, PAP, RAP, UAP, UVP
<b>Default</b>	P2

## Display Format

The Display Format parameter allows you to specify whether to display MAP measurement (M) with or without the Systolic (S) and Diastolic (D) measurements.

The values for the Display Format parameter are:

<b>Possible Values</b>	S/D (M), S/D, (M) S/D, (M)
<b>Default</b>	S/D (M)



## IBP3 Parameter Settings

The IBP3 parameter settings allow you to view and modify functions related to the third channel of the X Series unit for invasive blood pressure monitoring, and include:

- P3 Systolic Alarm
- P3 Diastolic Alarm
- P3 Mean Alarm
- Source Label
- Display Format

### P3 Systolic Alarm

The following options allow you to set the limits of the P3 Systolic alarm for all patient age groups.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P3 systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P3 systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P3 systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 220 Pediatric: 145 Neonate: 100

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P3 systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 75 Pediatric: 75 Neonate: 50

## P3 Diastolic Alarm

The following options allow you to set the limits of the P3 Diastolic alarm for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P3 diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P3 diastolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P3 diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 110 Pediatric: 100 Neonate: 70

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P3 diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 35 Pediatric: 35 Neonate: 30

## P3 Mean Alarm

The following options allow you to set the limits of the P3 Mean alarm for all patient age groups.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P3 Mean alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P3 Mean alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P3 Mean alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	Adult: 120 Pediatric: 110 Neonate: 80

## Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P3 Mean alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	Adult: 50 Pediatric: 50 Neonate: 35

## Source Label

The Source Label parameter allows you to specify the label of the third channel.

The values for the Source Label parameter are:

<b>Possible Values</b>	P3, ABP, AO, ART, BAP, CVP, FAP, ICP, PAP, RAP, UAP, UVP
<b>Default</b>	P3

## Display Format

The Display Format parameter allows you to specify whether to display MAP measurement (M) with or without the Systolic (S) and Diastolic (D) measurements.

The values for the Display Format parameter are:

<b>Possible Values</b>	S/D (M), S/D, (M) S/D, (M)
<b>Default</b>	S/D (M)

# CHAPTER 4

## Supervisor Menu



This chapter describes the configuration settings you can modify in the Supervisor menu.

It includes the following sections:

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## Accessing the Supervisor Menu

The Supervisor menu allows you to configure default settings such as alarms, NIBP, and Defib/Pacer. Access to the Supervisor menu is passcode-protected and only users authorized to view and modify the settings may do so.

To access the Supervisor menu, press the **More** () and **Setup** () quick access keys, and select **Supervisor**. You are then required to enter the four digit Supervisor passcode before accessing the configurable options in the menus.

The Supervisor menu includes the following parameter settings.

- "Alarms Parameters" on the facing page
- "Log Parameters" on page 140
- "Defib/Pacer Parameters" on page 144
- "ECG Parameters" on page 149
- "NIBP Parameters" on page 153
- "Printer Parameters" on page 155
- "Display/Configuration Parameters" on page 158
- "AED/Advisory Parameters" on page 173
- "CPR Parameters" on page 182
- "Communications Parameters" on page 188
- "Clinical Dashboards" on page 210
- "Service Parameters" on page 212

## Alarms Parameters

The Alarm parameters allow you to view and modify functions related with Alarm states and thresholds for the X Series unit. The main level parameters in this menu include:

- General
- Default Adult
- Default Pediatric
- Default Neonate

### General

The following options allow you to specify basic conditions for all alarms.

#### Volume

The Volume parameter allows you to set the volume level for all alarms.

The values for the Volume parameter are:

<b>Possible Values</b>	Low, Medium, High
<b>Default</b>	Medium

#### Audio Paused Time (Alarm Suspend Time)

The Audio Paused Time parameter allows you to specify how long any alarm is paused (suspended). No alarms sound during the pause time period, however, if an alarm occurs during this period, the visual alarm indicators display.

The values for the Audio Paused Time parameter are:

<b>Possible Values</b>	Disable, 2 min, 4 min, 15 min
<b>Default</b>	4 min

#### Alarm Latching Enable

The Alarm Latching Enable parameter allows you to turn alarm latching on or off for high priority patient alarms. When alarms are configured to be latching, alarm indicators (sound, message, color) remain, whether or not the condition is present. Latched alarms must be acknowledged even if the condition no longer exists. When alarms are configured as non-latching alarm indicators clear when the alarm condition ends whether or not the alarm was acknowledged.

The values for Alarm Latching Enable parameter are:

<b>Possible Values</b>	Yes, No
<b>Default</b>	No



### Reminder Alarm

The Alarm Reminder parameter allows you to specify whether to have a alarm reminder sound when an Audio Off condition persists. If you select **Enable**, a reminder alarm will sound every 5, 10 or 15 minutes (depending on configuration) while the Audio Off condition continues.

<b>Possible Values</b>	Enable, Disable
<b>Default</b>	Disable

### Reminder Alarm Interval

The Reminder Alarm Interval parameter allows you to specify how often an alarm reminder will sound when an Audio Off condition exists.

<b>Possible Values</b>	5 min, 10 min, 15 min
<b>Default</b>	5 min

## Default Adult

The following options allow you specify the alarm limits for adult patients.

### LTA (Life Threatening Alarms) Monitoring

The LTA Monitoring parameter allows you to enable or disable adult LTA monitoring.

The values for the LTA Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### HR/PR Alarm

The following options allow you to set the limits of the adult HR/PR alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the HR/PR alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the HR/PR alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Upper Limit

The Upper Limit parameter allows you to set the upper limit for the HR/PR alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	32-300
<b>Default</b>	120

Lower Limit

The Lower Limit parameter allows you to set the lower limit for the HR/PR alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	30-298
<b>Default</b>	50

### **NIBP Systolic Alarm**

The following options allow you to set the limits of the adult NIBP Systolic alarm.

Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the NIBP Systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the NIBP Systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the NIBP Systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	32-260
<b>Default</b>	220

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the NIBP Systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	30-258
<b>Default</b>	75

## NIBP Diastolic Alarm

The following options allow you to set the limits of the adult NIBP Diastolic alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the NIBP Diastolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the NIBP Diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	22-220
<b>Default</b>	110

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the NIBP Diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	20-218
<b>Default</b>	35

**NIBP MAP Alarm**

The following options allow you to set the limits of the adult NIBP MAP alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the NIBP MAP alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the NIBP MAP alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the NIBP MAP alarm..

The values for the Upper Limit parameter are:

<b>Possible Values</b>	25-230
<b>Default</b>	120

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the NIBP MAP alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	23-228
------------------------	--------

<b>Default</b>	50
----------------	----

### **EtCO<sub>2</sub> Alarm**

The following options allow you to set the limits of the adult EtCO<sub>2</sub> alarm.

#### **Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the adult EtCO<sub>2</sub> alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### **Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the adult EtCO<sub>2</sub> alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### **Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the adult EtCO<sub>2</sub> alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	5-150
<b>Default</b>	60

#### **Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the adult EtCO<sub>2</sub> alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-145
<b>Default</b>	8

### **FiCO<sub>2</sub> Alarm**

The following options allow you to set the limits of the adult FiCO<sub>2</sub> alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the FiCO2 alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the FiCO2 alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2-98
<b>Default</b>	8

**RR/BR Alarm**

The following options allow you to set the limits of the adult RR/BR alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the RR/BR alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit t for the RR/BR alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the RR/BR alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	5-150
<b>Default</b>	50

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the RR/BR alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-145
<b>Default</b>	3

### No Breath Alarm

The No Breathe Alarm parameter allows you to specify the time of the adult No Breath alarm.

The values for the No Breath Alarm are:

<b>Possible Values</b>	Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec
<b>Default</b>	Off

### SpO2 Alarm

The following options allow you to set the limits of the adult SpO2 alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpO2 alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpO2 alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
------------------------	---------

<b>Default</b>	Off
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#### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the SpO2 alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	52-100
<b>Default</b>	100

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit for the SpO2 alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	50-98
<b>Default</b>	85

### SpCO Alarm

The following options allow you to set the limits of the adult SpCO alarm.

 **Note:** The SpCO Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpCO alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpCO alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.



The values for the Upper Limit parameter are:

<b>Possible Values</b>	2-100
<b>Default</b>	10

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit for the SpCO alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	1-98
<b>Default</b>	0

### SpMet Alarm

The following options allow you to set the limits of the adult SpMet alarm.

 **Note:** The SpMet Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpMet alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpMet alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the SpMet alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2.0-100.0
------------------------	-----------

<b>Default</b>	3.0
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**Lower Limit**


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0.0-98.0
<b>Default</b>	0.0

**SpHb Alarm**

The following options allow you to set the limits of the adult SpHb alarm.

 **Note:** The SpHb Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the SpHb alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpHb alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the SpHb alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	g/dL: 2 to 24.5 mmol/L: 2 to 15
<b>Default</b>	17.0 g/dL 11.0 mmol/L

**Lower Limit**


The Lower Limit parameter allows you to set the lower limit for the SpHb alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	g/dL: 0 to 24.9 mmol/L: 0 to 15.4
<b>Default</b>	7.0 g/dL 4.0 mmol/L

**SpOC Alarm**

The following options allow you to set the limits of the adult SpOC alarm.

 **Note:** The SpOC Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the SpOC alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the SpOC alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.1 to 35 ml/dL
<b>Default</b>	25 ml/dL

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the SpOC alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 34.9 ml/dL
<b>Default</b>	10 ml/dL

### PVI Alarm

The following options allow you to set the limits of the adult PVI alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the PVI alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the PVI alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the PVI alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2 to 100%
<b>Default</b>	40%

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the PVI alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 98%
<b>Default</b>	5%

### PI Alarm

The following options allow you to set the limits of the adult PI alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the PI alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the PI alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the PI alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.2 to 20%
<b>Default</b>	20%

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the PI alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 19.8%
<b>Default</b>	0%

## T1 Alarm

The following options allow you to set the limits of the adult T1 alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the T1 alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the T1 alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the T1 alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the T1 alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
<b>Default</b>	°F: 95.0 °C: 35.0

**T2 Alarm**

The following options allow you to set the limits of the adult T2 alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the T2 alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
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<b>Default</b>	Off
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**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the T2 alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the T2 alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the T2 alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
<b>Default</b>	°F: 95.0 °C: 35.0

 **$\Delta T$  Alarm**

The following options allow you to set the limits of the adult  $\Delta T$  alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the  $\Delta T$  alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the  $\Delta T$  alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the  $\Delta T$  alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 0.2-90.0 °C: 0.2-50.0
<b>Default</b>	°F: 5.0 °C: 2.8

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the  $\Delta T$  alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 0.0-89.8 °C: 0.0-49.8
<b>Default</b>	°F: 0.0 °C: 0.0

**P1 Systolic Alarm**

The following options allow you to set the limits of the adult P1 Systolic alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P1 Systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off



**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P1 Systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the P1 Systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	220

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the P1 Systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	75

**P1 Diastolic Alarm**

The following options allow you to set the limits of the adult P1 Diastolic alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P1 Diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P1 Diastolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P1 Diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	110

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P1 Diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	35

### P1 Mean Alarm

The following options allow you to set the limits of the adult P1 Mean alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P1 Mean alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P1 Mean alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P1 Mean alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	120

Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P1 Mean alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

## P2 Systolic Alarm

The following options allow you to set the limits of the adult P2 Systolic alarm.

Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P2 Systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P2 Systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P2 Systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	220

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the P2 Systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	75

**P2 Diastolic Alarm**

The following options allow you to set the limits of the adult P2 Diastolic alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P2 Diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P2 Diastolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the P2 Diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	110

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the P2 Diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
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<b>Default</b>	35
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### P2 Mean Alarm

The following options allow you to set the limits of the adult P2 Mean alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P2 Mean alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P2 Mean alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P2 Mean alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	120

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P2 Mean alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

### P3 Systolic Alarm

The following options allow you to set the limits of the adult P3 Systolic alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P3 Systolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the upper limit for the P3 Systolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P3 Systolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	220

### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P3 Systolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	75

## P3 Diastolic Alarm

The following options allow you to set the limits of the adult P3 Diastolic alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P3 Diastolic alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P3 Diastolic alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit for the P3 Diastolic alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	110

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit for the P3 Diastolic alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	35

### P3 Mean Alarm

The following options allow you to set the limits of the adult P3 Mean alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit for the P3 Mean alarm.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit for the P3 Mean alarm.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit for the P3 Mean alarm.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	120

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit for the P3 Mean alarm.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

**Default Pediatric**

The following options allow you to specify the alarm limits for pediatric patients.

**LTA Monitoring**

The LTA Monitoring parameter allows you to enable or disable pediatric LTA Monitoring.

The values for the LTA Monitoring parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**HR/PR Alarm**

The following options allow you to set the limits of the pediatric HR/PR alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:



<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	32-300
<b>Default</b>	150

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	30-298
<b>Default</b>	50

### **NIBP Systolic Alarm**

The following options allow you to set the limits of the pediatric NIBP Systolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	32-160
<b>Default</b>	145

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	30-158
<b>Default</b>	75

### NIBP Diastolic Alarm

The following options allows you to set the limits of the pediatric NIBP Diastolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	32-130
<b>Default</b>	100

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	30-128
<b>Default</b>	35

**NIBP MAP Alarm**

The following options allow you to set the limits of the pediatric NIBP MAP alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	25-140
<b>Default</b>	110

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	23-138
<b>Default</b>	50

### **EtCO<sub>2</sub> Alarm**

The following options allow you to set the limits of the pediatric EtCO<sub>2</sub> alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	5-150
<b>Default</b>	60

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-145
<b>Default</b>	8

### **FiCO<sub>2</sub> Alarm**

The following options allows you to set the limits of the pediatric FiCO<sub>2</sub> alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2-98
<b>Default</b>	8

### RR/BR Alarm

The following options allow you to set the limits of the pediatric RR/BR alarm.

Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	5-150
<b>Default</b>	50

Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-145
<b>Default</b>	3

### No Breath Alarm

The No Breath Alarm parameter allows you to specify the time of the pediatric No Breath alarm.

The values for the No Breath Alarm parameter are:

<b>Possible Values</b>	Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec
<b>Default</b>	Off

### SpO2 Alarm

The following options allow you to set the limits of the pediatric SpO2 alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	52-100
<b>Default</b>	100

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	50-98
<b>Default</b>	85

### SpCO Alarm

The following options allow you to set the limits of the pediatric SpCO alarm.

 **Note:** The SpCO Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2-100
<b>Default</b>	10

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	1-98
<b>Default</b>	0

### SpMet Alarm

The following options allow you to set the limits of the pediatric SpMet alarm.

 **Note:** The SpMet Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2.0-100.0
<b>Default</b>	3.0

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0.0-98.0
<b>Default</b>	0.0

### SpHb Alarm

The following options allow you to set the limits of the pediatric SpHb alarm.

 **Note:** The SpHb Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:



<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	g/dL: 2 to 25 mmol/L: 2 to 15.5
<b>Default</b>	10.0 g/dL 7.0 mmol/L

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	g/dL: 0 to 24.9 mmol/L: 0 to 15.4
<b>Default</b>	0 g/dL 0 mmol/L

### SpOC Alarm

The following options allow you to set the limits of the pediatric SpOC alarm.

 **Note:** The SpOC Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.1 to 35 ml/dL
<b>Default</b>	20 ml/dL

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 34.9 ml/dL
<b>Default</b>	0

### PVI Alarm

The following options allow you to set the limits of the pediatric PVI alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2 to 100%
<b>Default</b>	40%

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 98%
<b>Default</b>	5%

### PI Alarm

The following options allow you to set the limits of the pediatric PI alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.2 to 20%
<b>Default</b>	20%

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 19.8%
<b>Default</b>	0%

**T1 Alarm**

The following options allows you to set the limits of the pediatric T1 alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
<b>Default</b>	°F: 95.0 °C: 35.0

## T2 Alarm

The following options allow you to set the limits of the pediatric T2 alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
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<b>Default</b>	°F: 95.0 °C: 35.0
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### $\Delta T$ Alarm

The following options allows you to set the limits of the pediatric  $\Delta T$  alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 0.2-90.0 °C: 0.2-50.0
<b>Default</b>	°F: 5.0 °C: 2.8

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 0.0-89.8 °C: 0.0-49.8
<b>Default</b>	°F: 0.0 °C: 0.0

## P1 Systolic Alarm

The following options allows you to set the limits of the pediatric P1 Systolic alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	145

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	75

## P1 Diastolic Alarm

The following options allow you to set the limits of the pediatric P1 Diastolic alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
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<b>Default</b>	Off
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**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	100

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	35

**P1 Mean Alarm**

The following options allow you to set the limits of the pediatric P1 Mean alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off



### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	110

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

## P2 Systolic Alarm

The following options allow you to set the limits of the pediatric P2 Systolic alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	145

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	75

**P2 Diastolic Alarm**

The following options allow you to set the limits of the pediatric P2 Diastolic alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	100

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	35

## P2 Mean Alarm

The following options allow you to set the limits of the pediatric P2 Mean alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	110

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

## P3 Systolic Alarm

The following options allow you to set the limits of the pediatric P3 Systolic alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
------------------------	---------

<b>Default</b>	Off
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#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	145

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	75

### P3 Diastolic Alarm

The following options allows you to set the limits of the pediatric P3 Diastolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	100

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	35

### P3 Mean Alarm

The following options allow you to set the limits of the pediatric P3 Mean alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	110

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

**Default Neonate**

The following options allow you to specify the alarm limits for neonate patients.

**HR/PR Alarm**

The following options allow you to set the limits of the neonate HR/PR alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	32-300
<b>Default</b>	200

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	30-298
<b>Default</b>	100

### **NIBP Systolic Alarm**

The following options allow you to set the limits of the neonate NIBP Systolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	22-120
<b>Default</b>	100

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	20-118
<b>Default</b>	50

### **NIBP Diastolic Alarm**

The following options allow you to set the limits of the neonate NIBP Diastolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	12-110
<b>Default</b>	70

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	10-108
<b>Default</b>	30

### **NIBP MAP Alarm**

The following options allow you to set the limits of the neonate NIBP MAP alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:



<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	15-110
<b>Default</b>	80

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	13-108
<b>Default</b>	35

### **EtCO<sub>2</sub> Alarm**

The following options allow you to set the limits of the neonate EtCO<sub>2</sub> alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	5-150
<b>Default</b>	60

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-145
<b>Default</b>	8

**FiCO<sub>2</sub> Alarm**

The following options allow you to set the limits of the neonate FiCO<sub>2</sub> alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2-98
<b>Default</b>	8

**RR/BR Alarm**

The following options allow you to set the limits of the neonate RR/BR alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	5-150
<b>Default</b>	80

Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0-145
<b>Default</b>	12

### No Breath Alarm

The No Breath Alarm parameter allows you to specify the time of the neonate No Breath alarm.

The values for the No Breath Alarm parameter are:

<b>Possible Values</b>	Off, 10 sec, 15 sec, 20 sec
<b>Default</b>	20 sec

### SpO2 Alarm

The following options allow you to set the limits of the neonate SpO2 alarm.

Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	52-100
<b>Default</b>	95

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	50-98
<b>Default</b>	85

### SpCO Alarm

The following options allow you to set the limits of the neonate SpCO alarm.

 **Note:** The SpCO Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2-100
<b>Default</b>	10

Lower Limit


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	1-98
<b>Default</b>	0

### SpMet Alarm

The following options allow you to set the limits of the neonate SpMet alarm.

 **Note:** The SpMet Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2.0-100.0
<b>Default</b>	3.0

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0.0-98.0
<b>Default</b>	0.0

### SpHb Alarm

The following options allow you to set the limits of the neonate SpHb alarm.



**Note:** The SpHb Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	g/dL: 2 to 25 mmol/L: 2 to 15.5
<b>Default</b>	17.0 g/dL 11.0 mmol/L

#### Lower Limit


The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	g/dL: 0 to 24.9 mmol/L: 0 to 15.4
<b>Default</b>	7.0 g/dL 4.0 mmol/L

### SpOC Alarm

The following options allow you to set the limits of the neonate SpOC alarm.

 **Note:** The SpOC Alarm parameter settings are not available on units with the SpO2 Nellcor module installed.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.1 to 35 ml/dL
<b>Default</b>	20 ml/dL

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 34.9 ml/dL
<b>Default</b>	0

## PVI Alarm

The following options allow you to set the limits of the neonate PVI alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	2 to 100%
<b>Default</b>	40%

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 98%
<b>Default</b>	5%

## PI Alarm

The following options allow you to set the limits of the neonate PI alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
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<b>Default</b>	Off
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**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	0.2 to 20%
<b>Default</b>	20%

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	0 to 19.8%
<b>Default</b>	0%

**T1 Alarm**

The following options allow you to set the limits of the neonate T1 alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
<b>Default</b>	°F: 95.0 °C: 35.0

## T2 Alarm

The following options allow you to set the limits of the neonate T2 alarm.

### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 34.0-122.0 °C: 2.0-50.0
<b>Default</b>	°F: 100.0 °C: 37.8

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 32.0-120.0 °C: 0.0-48.0
<b>Default</b>	°F: 95.0 °C: 35.0

 **$\Delta T$  Alarm**

The following options allow you to set the limits of the neonate  $\Delta T$  alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	°F: 0.2-90.0 °C: 0.2-50.0
<b>Default</b>	°F: 5.0

	°C: 2.8
--	---------

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	°F: 0.0-89.8 °C: 0.0-49.8
<b>Default</b>	°F: 0.0 °C: 0.0

**P1 Systolic Alarm**

The following options allows you to set the limits of the neonate P1 Systolic alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	100

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

### P1 Diastolic Alarm

The following options allow you to set the limits of the neonate P1 Diastolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	70

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	30

### P1 Mean Alarm

The following options allow you to set the limits of the neonate P1 Mean alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	80

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	35

## P2 Systolic Alarm

The following options allow you to set the limits of the neonate P2 Systolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	100

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

### P2 Diastolic Alarm

The following options allow you to set the limits of the neonate P2 Diastolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	70

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	30

**P2 Mean Alarm**

The following options allow you to set the limits of the neonate P2 Mean alarm.

**Upper Limit Enable**

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Lower Limit Enable**

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	80

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:



<b>Possible Values</b>	-30-298
<b>Default</b>	35

### P3 Systolic Alarm

The following options allow you to set the limits of the neonate P3 Systolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	100

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	50

### P3 Diastolic Alarm

The following options allow you to set the limits of the neonate P3 Diastolic alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Upper Limit

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	70

#### Lower Limit

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	30

### P3 Mean Alarm

The following options allow you to set the limits of the neonate P3 Mean alarm.

#### Upper Limit Enable

The Upper Limit Enable parameter allows you to enable or disable the upper limit.

The values for the Upper Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Lower Limit Enable

The Lower Limit Enable parameter allows you to enable or disable the lower limit.

The values for the Lower Limit Enable parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

**Upper Limit**

The Upper Limit parameter allows you to set the upper limit.

The values for the Upper Limit parameter are:

<b>Possible Values</b>	-28-300
<b>Default</b>	80

**Lower Limit**

The Lower Limit parameter allows you to set the lower limit.

The values for the Lower Limit parameter are:

<b>Possible Values</b>	-30-298
<b>Default</b>	35

## Log Parameters

The Log parameters allow you to view and modify functions related to recording data. The main level parameters in this menu include:

- Treatment Options
- Waveform Recording

### Treatment Options

The following options allow you to set values related to Treatment options.

#### Configuration Method

The Configuration Method parameter allows you to specify from what listing to configure Treatment buttons.

The values for the Configuration Method parameter are:

<b>Possible Values</b>	Select From Predefined List, Define Custom Labels
<b>Default</b>	Select From Predefined List

#### Treatment Button #1

The Treatment Button #1 parameter allows you to specify what treatment option Button #1 covers.

The values for the Treatment Button #1 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	O2

#### Treatment Button #2

The Treatment Button #2 parameter allows you to specify what treatment option Button #2 covers.

The values for the Treatment Button #2 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	ASA

#### Treatment Button #3

The Treatment Button # 3 parameter allows you to specify what treatment option Button #3 covers.

The values for the Treatment Button #3 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	Nitro

**Treatment Button #4**

The Treatment Button #4 parameter allows you to specify what treatment option Button #4 covers.

The values for the Treatment Button #4 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	Morph

**Treatment Button #5**

The Treatment Button #5 parameter allows you to specify what treatment option Button #5 covers.

The values for the Treatment Button #5 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	IV

**Treatment Button #6**

The Treatment Button #6 parameter allows you to specify what treatment option Button #6 covers.

The values for the Treatment Button #6 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	B Block

**Treatment Button #7**

The Treatment Button #7 parameter allows you to specify what treatment option Button #7 covers.

The values for the Treatment Button #7 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	Lido

**Treatment Button #8**

The Treatment Button #8 parameter allows you to specify what treatment option Button #8 covers.

The values for the Treatment Button #8 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	MgSO4

**Treatment Button #9**

The Treatment Button #9 parameter allows you to specify what treatment option Button #9 covers.

The values for the Treatment Button #9 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	Valium

**Treatment Button #10**

The Treatment Button #10 parameter allows you to specify what treatment option Button #10 covers.

The values for the Treatment Button #10 parameter are:

<b>Possible Values</b>	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
<b>Default</b>	Sedate

## Waveform Recording

The following options allow you to set values related to waveform recording.

### Continuous Waveform Recording

The Continuous Waveform Recording parameter allows you to enable or disable continuous waveform recording.

The values for the Continuous Waveform Recording parameter are:

<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Disabled

### Record Displayed Waveforms

If enabled, the Record Displayed Waveform parameter allows you to specify which displayed waveforms are recorded.

The values for the Record Displayed Waveforms parameter are:

<b>Possible Values</b>	All Displayed Waveforms, Top Waveform Only
<b>Default</b>	All Displayed Waveforms

### Record Additional Waveforms

If enabled, the Record Additional Waveform parameter allows you to specify what additional waveforms are recorded.

The values for the Record Additional Waveforms parameter are:

<b>Possible Values</b>	CO2 Capnogram, IBP and CO2 Capnogram
<b>Default</b>	CO2 Capnogram

### Record Pads Imp. Waveform

The Record Pads Imp. Waveform parameter allows you to enable or disable pads impedance recording.

The values for the Continuous Waveform Recording parameter are:

<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Disabled

## Defib/Pacer Parameters

The Defib/Pacer parameters allow you to view and modify functions related to performing defibrillation and pacing. The main level parameters in this menu include:

- Default Settings
- Energy Escalation

### Default Settings

#### Adult Defib Ext. Pdl. Energy

The Adult Defib Ext. Pdl. Energy parameter allows you to set the energy level of the external paddle for adult patients.

The values for the Adult Defib Ext. Pdl. Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
<b>Default</b>	120 J

#### Pediatric Defib Ext. Pdl. Energy

The Pediatric Defib Ext. Pdl. Energy parameter allows you to set the energy level of the external paddle for pediatric patients.

The values for the Pediatric Defib Ext. Pdl. Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
<b>Default</b>	50 J

#### Neonate Defib Ext. Pdl. Energy

The Neonate Defib Ext. Pdl. Energy parameter allows you to set the energy level of the external paddle for neonate patients.

The values for the Neonate Defib Ext. Pdl. Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
<b>Default</b>	50 J

#### Adult Defib Int. Pdl. Energy

The Adult Defib Int. Pdl. Energy parameter allows you to set the energy level of the internal paddle for adult patients.

The values for the Adult Defib Int. Pdl. Energy parameter are:



<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J
<b>Default</b>	10 J

**Pediatric Defib Int. Pdl. Energy**

The Pediatric Defib Int. Pdl. Energy parameter allows you to set the energy level of the internal paddle for pediatric patients.

The values for the Pediatric Defib Int. Pdl. Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J,
<b>Default</b>	10 J

**Neonate Defib Int. Pdl. Energy**

The Neonate Defib Int. Pdl. Energy parameter allows you to set the energy level of the internal paddle for neonate patients.

The values for the Neonate Defib Int. Pdl. Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J
<b>Default</b>	10 J

**Sync After Cardioversion**

The Sync After Cardioversion parameter allows you to enable or disable synchronizing the defibrillator discharge with the ECG R-wave.

The values for the Sync After Cardioversion parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Default Pacer Mode

The Default Pacer Mode parameter allows you to set the default Pacer Mode.

The values for the Default Pacer Mode parameter are:

<b>Possible Values</b>	Demand, Fixed
<b>Default</b>	Demand

- **Demand:** pacing pulses are inhibited by the patients QRS complexes that occur during an interval that is dependent on the setting of the rate control. If during that interval no QRS complexes are detected, a pacing pulse is delivered to the patient, the number of which and the rate are selected in the pacing rate window.
- **Fixed:** pacing pulses are not dependent on the patient's cardiac activity and are delivered at the selected pacing rate.

### Default Pacer Rate


The Default Pacer Rate parameter allows you to set the default Pacer rate.

The values for the Default Pacer Rate parameter are:

<b>Possible Values</b>	30-180; <100 by 5's, >100 by 10's
<b>Default</b>	70

### Auto Display Pads/Paddles

The Auto Display Pads/Paddles parameter allows you to enable/disable the display of Pads or Paddles as the top waveform trace when the Defibrillation Control Panel is active.

 **Note:** This parameter is only applicable to units with CP version 02.08.011.4084 and MP/PP version 02.18.03.00 or higher.

The values for the Auto Display Pads/Paddles parameter are:

<b>Possible Values</b>	Yes, No
<b>Default</b>	Yes

## Energy Escalation

The following options allow you to set the energy levels of the shocks given.

### Basic Auto Energy Selection

The Basic Auto Energy Selection parameter automatically escalates the defibrillator energy settings in Manual mode. This feature will operate only when Pads or Paddles are connected. Connecting internal paddles at any time during Basic Auto Energy Escalation will reset the energy back to the Internal Paddle energy level selected in Default Settings.

When enabled, the Adult Defib Ext. Pdl Energy and Pediatric Defib Ext. Pdl. Energy parameters in Default Settings are grayed out.

The values for Basic Auto Energy Selection are:

<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Disabled

### Adult Shock 1 Energy

The Adult Shock 1 Energy parameter allows you to set the energy level of the first shock given for adult patients.

The values for the Adult Shock 1 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	120 J

### Adult Shock 2 Energy

The Adult Shock 2 Energy parameter allows you to set the energy level of the second shock given for adult patients.

The values for the Adult Shock 2 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	150 J

### Adult Shock 3 Energy

The Adult Shock 3 Energy parameter allows you to set the energy level of the third shock given for adult patients.

The values for the Adult Shock 3 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	200 J

### Pediatric Shock 1 Energy

The Pediatric Shock 1 Energy parameter allows you to set the energy level of the first shock given for pediatric patients.

The values for the Pediatric Shock 1 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	50 J

### Pediatric Shock 2 Energy

The Pediatric Shock 2 Energy parameter allows you to set the energy level of the second shock given for pediatric patients.

The values for the Pediatric Shock 2 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	70 J

### Pediatric Shock 3 Energy

The Pediatric Shock 3 Energy parameter allows you to set the energy level of the third shock given for pediatric patients.

The values for the Pediatric Shock 3 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	85 J

## ECG Parameters

The ECG parameters allow you to view and modify functions related to ECG monitoring. The main level parameters in this menu include:

- General
- 12-Lead ECG

### General

The following options allow you to specify basic conditions for all alarms.

### 12-Lead ECG

The following options allow you to set values related to the X Series unit's 12-Lead ECG cables.

#### Print on 12-Lead Acquire

The Print on 12-Lead Acquire parameter allows you to enable or disable printing of data acquired by the 12-Lead electrode cables.

The values for the Print on 12-Lead Acquire parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

#### Print Copies

The Print Copies parameter allows you to specify how many copies of data are printed.

The values for the Print Copies parameter are:

<b>Possible Values</b>	1, 2, 3, 4, 5
<b>Default</b>	1

#### 12-Lead Format


The 12-Lead Format parameter allows you to specify the print format of 12-Lead data.

The values for the 12-Lead Format parameter are:

<b>Possible Values</b>	2x6, 3x4, 3x4 Cabrera, 3x4 Hybrid, 3x4 Cabrera Hybrid
<b>Default</b>	3x4

#### Print 10s Trace

The Print 10s Trace parameters allow you to choose to have 10 seconds of up to 3 additional waveform traces print at the end of the 12-Lead report.

 **Note:** If you are using a 3 or 5 lead cable, select V1 if you expect a V lead. If you select V2-V6 with any cable other than a 12-lead cable the unit displays the message *LEAD FAULT*.

The values for the Print 10s Trace 1 parameters are:

<b>Possible Values</b>	Off, I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
<b>Default</b>	I

The values for the Print 10s Trace 2 parameter are:

<b>Possible Values</b>	Off, I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
<b>Default</b>	Off

The values for the Print 10s Trace 3 parameter are:

<b>Possible Values</b>	Off, I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
<b>Default</b>	Off

## 12-Ld Frequency Response

The 12-Ld Frequency Response parameter allows you to specify the 12-Lead waveform frequency response.


The values for the 12-Ld Frequency Response parameter are:

<b>Possible Values</b>	Diagnostic, Filtered Diagnostic
<b>Default</b>	Filtered Diagnostic

- **Diagnostic:** frequency ranges are 0.525-150 Hz.
- **Filtered Diagnostic:** frequency ranges are 0.525-40 Hz.

## 12-Ld Analysis Enabled

The 12-Ld Analysis Enabled parameter allows you to enable or disable the 12-Lead Interpretive Analysis capability.

 **Note:** This parameter is available only if the 12-Lead Interpretive Analysis option has been purchased.

The values for the 12-Ld Analysis Enabled parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On


### **Interpretive Text**

The Interpretive Text parameter allows you to choose whether or not to have 12-Lead interpretive statements display on 12-Lead Interpretive Analysis reports (both on screen and on printouts). When this parameter is set to On and 12-Lead Interpretive Analysis is enabled, the ECG analysis measurements along with interpretation statements display on the 12-Lead Interpretive Analysis report. When this parameter is set to Off only the measurements display without any interpretation statements. The setting you choose here persists through all cases and device updates.

The values for the Interpretive Text parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

### Patient Information Prompt

The Patient Information Prompt parameter allows you to specify whether to prompt the user to enter patient demographic data (age, gender etcetera) before initiating 12-Lead Interpretive Analysis. When the Patient Information Prompt is enabled (On) and patient age and gender has not been previously provided for the current case, the Patient Information screen displays when the Acquire quick access key  is pressed to initiate 12-Lead Interpretive Analysis. The automatic display of the Patient Information screen only occurs once per case.

The values for the Patient Information Prompt parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	No

### Print 12-Ld 1mV Bracket

The Print 12-Ld 1mV Bracket parameter allows you to enable or disable the display of the 1mV calibration bracket next to ECG waveform traces on the 12 Lead Snapshot report. If enabled the 1mV calibration bracket will appear on all 12 Lead Snapshot reports (3 x 4 Cabrera, 3 x 4, and 2 x 6).

The values for the Print 12-Ld 1mV Bracket parameter are:

<b>Possible Values</b>	Yes, No
<b>Default</b>	No



## NIBP Parameters

The NIBP parameters allow you to view and modify functions related to noninvasive blood pressure monitoring. The main level parameters in this menu include:


- Default NIBP Mode
- Default Auto Mode Interval
- Default Cuff Inflation Target (Adult)
- Default Cuff Inflation Target (Ped.)
- Default Cuff Inflation Target (Neo.)

### Default NIBP Mode

The Default NIBP Mode parameter allows you to set the X Series unit NIBP Mode.

The values for the Default NIBP Mode parameter are:

<b>Possible Values</b>	Manual, Auto
<b>Default</b>	Manual

- **Manual:** unit takes a single NIBP measurement when you press the **NIBP** button on the front panel (). To repeat, press the **NIBP** key again.
- **Auto:** unit takes the first of a series of NIBP measurements when the **Auto Interval** timer expires, and then repeats the NIBP measurement at this specified interval.

### Default Auto Mode Interval

The Default Auto Mode Interval parameter allows you to specify the NIBP measurement interval time in Auto Mode.

The values for the Default Auto Mode Interval parameter are:

<b>Possible Values</b>	1 min, 2 min, 3 min, 5 min, 10 min, 15 min, 30 min, 60 min
<b>Default</b>	5 min

### Default Cuff Inflation Target (Adult)

The Default Cuff Inflation Target (Adult) parameter allows you to set the cuff inflation target for adult patients.

The values for the Default Cuff Inflation Target (Adult) parameter are:

<b>Possible Values</b>	120-260; by 20's
<b>Default</b>	160

## Default Cuff Inflation Target (Ped.)

The Default Cuff Inflation Target (Pediatric) parameter allows you to set the cuff inflation target for pediatric patients.

The values for the Default Cuff Inflation Target (Ped.) parameter are:

<b>Possible Values</b>	80-150; by 10's
<b>Default</b>	120

## Default Cuff Inflation Target (Neo.)

The Default Cuff Inflation Target (Neonate) parameter allows you to set the cuff inflation target for neonate patients.

The values for the Default Cuff Inflation Target (Neo.) parameter are:

<b>Possible Values</b>	60-130; by 10's
<b>Default</b>	90

## Printer Parameters

The Printer parameters allow you to view and modify what and how things are printed. The main level parameters in this menu include:

- Print on Defib/Pacer Events
- Print on Event
- Print on Treatment Snapshot
- Print Treatment Summary Snapshot
- Print on Analysis Results
- Print on Presenting Rhythm

### Print on Defib/Pacer Events

The Print on Defib/Pacer Events parameter allows you to enable or disable automatic printing on Defib/Pacer events.

The values for the Print on Defib/Pacer Events parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

### Print on Event

The Print on Event parameter allows you to enable or disable automatic printing on events.

The values for the Print on Event parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### Print on Treatment Snapshot

The Print on Treatment Snapshot parameter allows you to enable or disable automatic printing on treatment snapshots.

The values for the Print on Treatment Snapshot parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

---

## Print Treatment Summary Snapshots

The Print Treatment Summary Snapshots parameter allows you to enable or disable automatic printing on treatment summary snapshots.

The values for the Print Treatment Summary Snapshots parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	On

## Print on Analysis Results

The Print on Analysis Results parameter allows you to enable or disable automatic printing on analysis results.

The values for the Print on Analysis Results parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Print on Presenting Rhythm

The Print on Presenting Rhythm parameter allows you to enable or disable automatic printing on presenting rhythm.

The values for the Print on Presenting Rhythm parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Print On Readiness Test Results

The Print On Readiness Test Results parameter allows you to enable or disable automatic printing of readiness test results.

The values for the Print On Readiness Test Results parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

## Display/Configuration Parameters

The Display/Configuration parameters allow you to view and modify what and how things appear on the X Series monitor. The main level parameters in this menu include:

- Localization
- Color
- Clock
- Device Info
- Display Setup
- Supervisor Code
- Log Clear Code



**Note:** The Import Configuration and Export Configuration features are included in this menu, but they cannot be modified. See for information on how to use these features.

### Localization

The following options allow you to set language and units in accordance to local region.

#### Language

The Language parameter specifies which language the X Series unit uses.

The values for the Language parameter are:

<b>Possible Values</b>	Arabic (Voice only), Brazilian Portuguese, Simplified Chinese, Traditional Chinese, Czech, Danish, Dutch, English, Finnish, French, French Canadian, German, Italian, Japanese, Korean (Voice only), Norwegian, Polish, Romanian, Russian, Spanish, Swedish, Turkish
<b>Default</b>	English

#### Decimal Format

The Decimal parameter allows you to set what decimal is used.

The values for the Decimal parameter are:

<b>Possible Values</b>	. (dot) ,(comma)
<b>Default</b>	. (dot)

**Date Format**

The Date parameter allows you to set how the date is displayed.

The values for the Date parameter are:

<b>Possible Values</b>	MM/DD/YYYY, DD/MM/YYY, YYY/MM/DD, MM-DD-YYYY, DD-MM-YYYY, YYYY-MM-DD
<b>Default</b>	MM/DD/YYYY

**Time Format**

The Time Format parameter allows you to set how the time is displayed.

The values for the Time Format parameter are:

<b>Possible Values</b>	12 Hour, 24 Hour
<b>Default</b>	24 Hour

**Temp Units**

The Temp parameter allows you to set what temperature unit is used.

The values for the Temp Units parameter are:

<b>Possible Values</b>	°F, °C
<b>Default</b>	°F

**IBP Units**

The IBP Units parameter allows you to set what unit is use for IBP monitoring.

The values for the IBP Units parameter are:

<b>Possible Values</b>	mmHg, kPa
<b>Default</b>	mmHg

**CO2 Units**

The CO2 Units parameter allows you to set what unit is used for CO2 monitoring.

The values for the CO2 Units parameter are:

<b>Possible Values</b>	mmHg, kPa, %
<b>Default</b>	mmHg

**NIBP Units**

The NIBP Units parameter allows you to set what unit is used for NIBP monitoring.

The values for the NIBP Units parameter are:

<b>Possible Values</b>	mmHg, kPa
<b>Default</b>	mmHg

**ECG Lead Labels**

The ECG Lead Labels parameter allows you to set the labels for the ECG Lead cables.

The values for the ECG Lead Labels parameter are:

<b>Possible Values</b>	AAMI, IEC
<b>Default</b>	AAMI

**NIBP Display Format**

The NIBP Display Format parameter allows you to specify whether to display MAP measurement (M) with or without the Systolic (S) and Diastolic (D) measurements.

The values for the NIBP Display Format parameter are:

<b>Possible Values</b>	S/D (M), (M) S/D
<b>Default</b>	S/D (M)

**Length Units**

The Length Units parameter allows you to set the length units.

The values for the Length Units parameter are:

<b>Possible Values</b>	Inch, cm
<b>Default</b>	Inch

**AC Mains Filter**

The AC Mains Filter parameter allows you to specify how much energy is used by the AC mains filter.

The values for the AC Mains Filter parameter are:

<b>Possible Values</b>	Off, 50 Hz, 60 Hz
<b>Default</b>	60 Hz



### SpHb Units

The SpHb Units parameter allows you to specify the unit to use for measuring hemoglobin.

The values for the SpHb Units parameter are:

<b>Possible Values</b>	g/dL, mmol/L
<b>Default</b>	g/dL

## Color

The following options allows you to set the display colors for specific waveforms and information displayed on the X Series monitor.

### ECG Color

The ECG Color parameter allows you to specify the color for the ECG indicator on the X Series monitor.

The values for the ECG Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Green

### SpO<sub>2</sub> Color

The SpO<sub>2</sub> Color parameter allows you to specify the color of the SpO<sub>2</sub> indicator on the X Series monitor.

The values for the SpO<sub>2</sub> Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### SpCO Color

The SpCO Color parameter allows you to specify the color of the SpCO indicator on the X Series monitor.

The values for the SpCO Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### SpMet Color

The SpMet Color parameter allows you to specify the color of the SpMet indicator on the X Series monitor.

The values for the SpMet Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### SpHb Color

The SpHb Color parameter allows you to specify the color of the SpHb indicator on the monitor.

The values for the SpHb Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### SpOC Color

The SpOC Color parameter allows you to specify the color of the SpOC indicator on the monitor.

The values for the SpOC Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### PVI Color

The PVI Color parameter allows you to specify the color of the PVI indicator on the monitor.

The values for the PVI Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### PI Color

The PI Color parameter allows you to specify the color of the PI indicator on the monitor.

The values for the PI Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### NIBP Color

The NIBP Color parameter allows you to specify the color of the NIBP indicator on the X Series monitor.

The values for the NIBP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Cyan

### CO2 Color

The CO2 Color parameter allows you to specify the color of the CO<sub>2</sub> indicator and waveform on the X Series monitor.

The values for the CO2 Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Magenta

### Resp Color

The Resp Color parameter allows you to specify the color of the Resp indicator on the X Series monitor.

The values for the Resp Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Magenta

### Temp Color

The Temp Color parameter allows you to specify the color of the Temp indicator on the X Series monitor.

The values for the Temp Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	White

### IBP Source P1 Color

The IBP Source P1 Color parameter allows you to specify the color of the IBP Source P1 indicator on the X Series monitor.

The values for the IBP Source P1 Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Red

### IBP Source P2 Color

The IBP Source P2 Color parameter allows you to specify the color of the IBP Source P2 indicator on the X Series monitor.

The values for the IBP Source P2 Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Cyan

**IBP Source P3 Color**

The IBP Source P3 Color parameter allows you to specify the color of the IBP Source P3 indicator on the X Series monitor.

The values for the IBP Source P3 Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	White

**IBP Source ABP Color**

The IBP Source ABP Color parameter allows you to specify the color of the IBP Source ABP indicator on the X Series monitor.

The values for the IBP Source ABP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Green

**IBP Source ART Color**

The IBP Source ART Color parameter allows you to specify the color of the IBP Source ART indicator on the X Series monitor.

The values for the IBP Source ART Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Red

**IBP Source AO Color**

The IBP Source AO Color parameter allows you to specify the color of the IBP Source AO indicator on the X Series monitor.

The values for the IBP Source AO Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

**IBP Source CVP Color**

The IBP Source CVP Color parameter allows you to specify the color of the IBP Source CVP indicator on the X Series monitor.

The values for the IBP Source CVP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Cyan

### IBP Source ICP Color

The IBP Source ICP Color parameter allows you to specify the color of the IBP Source ICP indicator on the X Series monitor.

The values for the IBP Source ICP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	White

### IBP Source LAP Color

The IBP Source LAP Color parameter allows you to specify the color of the IBP Source LAP indicator on the X Series monitor.

The values for the IBP Source LAP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

### IBP Source PAP Color

The IBP Source PAP Color parameter allows you to specify the color of the IBP Source PAP indicator on the X Series monitor.

The values for the IBP Source PAP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Yellow

**IBP Source RAP Color**

The IBP Source RAP Color parameter allows you to specify the color of the IBP Source RAP indicator on the X Series monitor.

The values for the IBP Source RAP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Blue

**IBP Source UAP Color**

The IBP Source UAP Color parameter allows you to specify the color of the IBP Source UAP indicator on the X Series monitor.

The values for the IBP Source UAP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Red

**IBP Source UVP Color**

The IBP Source UVP Color parameter allows you to specify the color of the IBP Source UVP indicator on the X Series monitor.

The values for the IBP Source UVP Color parameter are:

<b>Possible Values</b>	Green, Blue, Yellow, Red, White, Magenta, Cyan
<b>Default</b>	Blue

**Device Info**

The following options allows you to set specific information on the X Series unit upon purchase.

**Unit ID**

The Unit ID parameter allows you to set a unique identification number for the X Series unit.

The values for the Unit ID parameter are:

<b>Possible Values</b>	Alphanumeric
<b>Default</b>	<blank>

**Department Name**

The Department Name parameter allows you to set the name of the department using the X Series unit.

The values for the Department Name parameter are:

<b>Possible Values</b>	Alphanumeric
<b>Default</b>	<blank>

### Contact Telephone

The Contact Telephone parameter allows you to set the telephone number of a contact for the user of the X Series unit.

The values for the Contact Telephone parameter are:

<b>Possible Values</b>	Alphanumeric
<b>Default</b>	<blank>



## Display Setup

The following options allow you to set values related to display.

### Display FiCO2

The Display FiCO2 parameter allows you to enable or disable FiCO2 monitoring.

The values for the Display FiCO2 parameter are:

<b>Possible Values</b>	Yes, No
<b>Default</b>	No

### Screen Cycle Display Formats

This Screen Cycle Display Formats parameter allows you to set the screen cycle display

The values for the Screen Cycle Display Formats parameter are:

<b>Possible Values</b>	All Available, Skip Large Numerics
<b>Default</b>	All Available

### Auto Pads

Pads automatically display on the Top Trace when patient impedance is detected.

The values for the Auto Pads parameter are:

<b>Possible Values</b>	Enabled/Disabled
<b>Default</b>	Enabled

### Top Trace Default ECG Lead

The Top Trace Default ECG Lead parameter allows you to set the default ECG Lead cable for the top trace.

The values for the Top Trace Default ECG Lead parameter are:

<b>Possible Values</b>	Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
<b>Default</b>	Pads

### Auto ECG Lead

The Auto ECG Lead parameter allows you to automatically display in the top trace the desired ECG leads when connected. This parameter is only available when Top Trace Default ECG Lead is set to Pads.

When the unit is turned on and a new case is created, the Auto ECG Lead feature will display Pads in the top trace by default. If an ECG connection to a patient is detected before a Pads patient connection, the top trace will be changed to the ECG lead selected in the Auto ECG Lead field. When an ECG connection to a patient is detected and the lead selected by the Auto ECG Lead field is not available, the selected lead will be displayed. This operation is only performed once for the duration of a case.

The values for the Auto ECG Lead parameter are:

<b>Possible Values</b>	Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
<b>Default</b>	II

### Default ECG Leads

The Default ECG Lead parameter allows you to select up to 3 additional traces to display on startup, if no other monitoring devices are attached.

The second and third default ECG lead selections are grayed out and set to Not Assigned until the first default ECG lead section field is set to a specific lead. Setting one of the Default ECG Lead to Not Assigned will automatically reset all of the lower priority selections to Not Assigned.

The values for Default ECG Leads parameters are:

<b>First Default Lead</b>	
<b>Possible Values</b>	Not Assigned, Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
<b>Default</b>	Not Assigned

<b>Second Default Lead</b>	
<b>Possible Values</b>	Not Assigned, Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
<b>Default</b>	Not Assigned

<b>Third Default Lead</b>	
<b>Possible Values</b>	Not Assigned, Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
<b>Default</b>	Not Assigned

### Enable NVG Mode

The Enable NVG Mode parameter allows you to enable or disable night vision goggle Mode.

The values for the Enable NVG Mode parameter are:

<b>Possible Values</b>	No, Yes
<b>Default</b>	No

### Log Transfer to USB Device

The Log Transfer to USB Device parameter allows you to enable or disable transfer of log files to a USB device. The values for the Log Transfer to USB Device parameter are:

<b>Possible Values</b>	No, Yes
<b>Default</b>	No

### Import/Export to USB Device

The Import/Export parameter allows you to enable or disable transfer of configuration files to a USB device. The values for the Import/Export to USB Device parameter are:

<b>Possible Values</b>	No, Yes
<b>Default</b>	No

### Supervisor Code

The Supervisor Code parameter allows you to set the Supervisor Code needed to access the Supervisor Menu.

The values for the Supervisor Code parameter are:

<b>Possible Values</b>	Numeric
<b>Default</b>	Contact the Zoll Technical Support Department if you do not have the default supervisor code.

## Log Clear Code

The Log Clear Code parameter allows you to set a user confirmation or a user confirmation and supervisor code to clear the disclosure log file.

### Log Clear Restriction

If you set this parameter to **User confirmation** the user will be prompted with a confirmation dialog before clearing the disclosure log. If you set this parameter to **Passcode** the user will have to enter a passcode and then be prompted with a confirmation dialog before clearing the disclosure log.

The values for the Log Clear Restriction parameter are:

<b>Possible Values</b>	User confirmation, Passcode
<b>Default</b>	User confirmation

### Log Clear Code

The values for the Log Clear Code parameter are:

<b>Possible Values</b>	Numeric
<b>Default</b>	1234

## AED/Advisory Parameters

The AED/Advisory parameters allow you to view and modify functions related to using the unit for automatic external and advisory defibrillation. The main level parameters in this menu include:

- General
- Energy Protocol
- AED Mode

### General

The following options allow you to set basic AED functions.

#### Power Up Mode


The Power Up Mode parameter allows you to set the mode in which the unit starts, or powers up.

The values for the Power Up Mode parameter are:

<b>Possible Values</b>	Manual, AED
<b>Default</b>	Manual

#### Restart Analysis After CPR

When this parameter is set to **Yes**, the analysis starts automatically after the CPR interval. When this parameter is set to **No**, the message *TO RESUME, PRESS "ANALYZE"* is displayed at the end of the CPR interval, but the analysis does not restart automatically.

 **Note:** When the Power Up Mode parameter is set to Manual, this parameter is **Yes** (Enabled).

The values for the Restart Analysis After CPR parameter are:

<b>Possible Values</b>	Yes, No
<b>Default</b>	Yes

**Manual Mode Analysis**

The Manual Mode Analysis parameter allows you to set the form of Manual Mode Analysis.

The values for the Manual Mode Analysis parameter are:

<b>Possible Values</b>	Single Analysis, Analysis/CPR Protocol
<b>Default</b>	Single Analysis

**Enable Voice Prompts**

The Enable Voice Prompts parameter allows you to specify when to use voice prompts.

The values for the Enable Voice Prompts parameter are:

<b>Possible Values</b>	Always, AED Mode Only
<b>Default</b>	Always

**Disarm Timeout**

The Disarm Timeout parameter allows you to set the time to disarm AED.

The values for the Disarm Timeout parameter are:

<b>Possible Values</b>	30 sec, 60 sec
<b>Default</b>	30 sec

**CPR Time**

The CPR Time parameter allows you to set the CPR time.

The values for the CPR Time parameter are:

<b>Possible Values</b>	1 min, 1.5 min, 2 min, 2.5 min, 3 min, 3.5 min, 4 min
<b>Default</b>	2 min

**CPR Message After “No Shock Advised”**

The CPR Message After “No Shock Advised” parameter allows you to set the message given after the “No Shock Advised” message.

The values for the CPR Message After “No Shock Advised” parameter are:

<b>Possible Values</b>	Perform CPR, If No Pulse, Perform CPR
<b>Default</b>	Perform CPR

**CPR Message After Shock Delivered**


The CPR Message After Shock Delivered parameter allows you to set the message given after the shock is delivered.

The values for the CPR Message After Shock Delivered parameter are:

<b>Possible Values</b>	Perform CPR, If No Pulse, Perform CPR
<b>Default</b>	Perform CPR

## Enable SCE

Use the SCE parameter to enable/disable the Shock Conversion Estimator (SCE). SCE enhances CPR Analysis and the effectiveness of CPR by estimating the probability of whether or not the current ECG can successfully be converted by shock therapy. If the SCE determines that the probability that the shock will not convert the patient's heart rhythm to an organized rhythm, the unit issues the *NO SHOCK ADVISED* prompt, indicating that the preferred method of treatment for the patient should continue to be CPR. The unit displays the SCE results with the message *SHOCK ADVISED SCE* or *NO SHOCK ADVISED SCE*.

 **Note:** Changes you make to the Enable SCE parameter take effect after the unit has been off for at least two minutes.

The values for the Enable SCE parameter are:

<b>Possible Values</b>	Yes, No
<b>Default</b>	No



## SCE Alter Adv Decision

The SCE Alter Adv Decision parameter determines how many shocks (after power up) are withheld (in favor of immediately resuming CPR) when a shockable rhythm is present but the Shock Conversion Estimator (SCE) indicates that the probability of successful defibrillation is low. The numerical value of this parameter (1, 2, 3, or 4) determines how many successive ECG analyses the unit will use SCE results for the Shock/ No Shock determination. For example, when the SCE Alter Adv Decision parameter is set to 2, the unit uses the SCE results for the first two analyses after the start of a new case. All subsequent rhythm analyses will base the shock/no shock determination only upon the presence or absence of VF or shockable VT.

**i Important:** Applying SCE logic to a number of early advisory analyses emphasizes the performance of CPR when a shockable rhythm is unlikely to convert to a spontaneous rhythm.

**Note:** Changes you make to the SCE Alter Adv Decision parameter take effect after power up.

The values for the SCE Alter Adv Decision parameter are:

<b>Possible Values</b>	Off, 1, 2, 3, 4
<b>Default</b>	1

**Note:** The SCE Alter Adv Decision counter resets when the patient mode is changed or the unit is off for at least two minutes and prior to the start of a new case.

## CPR Analysis (RapidShock)

Use the CPR Analysis parameter to enable/disable RapidShock. When RapidShock is enabled, the unit analyzes the ECG rhythm during chest compressions and then briefly reconfirms the analysis result during pauses in compressions. This reduces the amount of time needed to determine whether shock therapy is necessary. RapidShock is available in AED mode of operation only or in both AED and Rescue Protocol modes of operation.

**Note:** Changes you make to the CPR Analysis parameter take effect after the unit has been off for at least two minutes.

The values for the CPR Analysis parameter are:

<b>Possible Values</b>	AED Mode Only, AED and CPR Protocol, Disabled
<b>Default</b>	Enabled

## Energy Protocol

The following options allow you to set the energy levels of the shocks given.

### Adult Shock 1 Energy

The Adult Shock 1 Energy parameter allows you to set the energy level of the first shock given for adult patients.

The values for the Adult Shock 1 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	120 J

### Adult Shock 2 Energy

The Adult Shock 2 Energy parameter allows you to set the energy level of the second shock given for adult patients.

The values for the Adult Shock 2 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	150 J

### Adult Shock 3 Energy

The Adult Shock 3 Energy parameter allows you to set the energy level of the third shock given for adult patients.

The values for the Adult Shock 3 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	200 J

**Pediatric Shock 1 Energy**

The Pediatric Shock 1 Energy parameter allows you to set the energy level of the first shock given for pediatric patients.

The values for the Pediatric Shock 1 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	50 J

**Pediatric Shock 2 Energy**

The Pediatric Shock 2 Energy parameter allows you to set the energy level of the second shock given for pediatric patients.

The values for the Pediatric Shock 2 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	70 J

**Pediatric Shock 3 Energy**

The Pediatric Shock 3 Energy parameter allows you to set the energy level of the third shock given for pediatric patients.

The values for the Pediatric Shock 3 Energy parameter are:

<b>Possible Values</b>	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120J, 150 J, 200 J
<b>Default</b>	85 J

## AED Mode

The following options allow you to set specific functions of the AED Mode.

### Begin with CPR

The Begin with CPR parameter allows you to specify whether or not to begin with CPR.

The values for the Begin with CPR parameter are:

<b>Possible Values</b>	No, Yes
<b>Default</b>	No

### Manual Mode Restriction

The Manual Mode Restriction parameter allows you to set the restriction for entering Manual Mode.

The values for the Manual Mode Restriction parameter are:

<b>Possible Values</b>	User Conformation, Passcode
<b>Default</b>	User Conformation

### Manual Mode Passcode

The Manual Mode Passcode parameter allows you to set the Manual Mode Passcode.

The values for the Manual Mode Passcode parameter are:

<b>Possible Values</b>	Numeric
<b>Default</b>	

### NIBP Monitoring

The NIBP Monitoring parameter allows you to enable or disable NIBP monitoring during AED.

The values for the NIBP Monitoring parameter are:

<b>Possible Values</b>	Disable, Enable
<b>Default</b>	Disable

**CO2 Monitoring**

The CO2 Monitoring parameter allows you to enable or disable CO2 monitoring during AED.

The values for the CO2 Monitoring parameter are:

<b>Possible Values</b>	Disable, Enable
<b>Default</b>	Disable

**SpO2 Monitoring**

The SpO2 Monitoring parameter allows you to enable or disable SpO2 monitoring during AED.

The values for the SpO2 Monitoring parameter are:

<b>Possible Values</b>	Disable, Enable
<b>Default</b>	Disable

**Temperature Monitoring**

The Temperature Monitoring parameter allows you to enable or disable temperature monitoring during AED.

The values for the Temperature Monitoring parameter are:

<b>Possible Values</b>	Disable, Enable
<b>Default</b>	Disable

**12-Lead Monitoring**

The 12-Lead Monitoring parameter allows you to enable or disable 12-Lead monitoring during AED.

The values for the 12-Lead Monitoring are:

<b>Possible Values</b>	Disable, Enable
<b>Default</b>	Disable

**Allow User to End CPR to Analyze**

The Allow User to End CPR to Analyze parameter allows you to specify whether or not to end CPR in order to analyze.

The values for the Allow User to End CPR to Analyze parameter are:

<b>Possible Values</b>	No, Yes
<b>Default</b>	Yes

## CPR Parameters

The CPR parameters allow you to view and modify functions related to using the unit for CPR. The main level parameters in this menu include:

- AHA/ERC Guidelines
- CPR Time
- Enable Metronome
- Constant Metronome
- Enable CPR Prompts
- Display “Fully Release” Prompt
- Log CPR Metrics
- Auto Display Compression Trace

### AHA/ERC Guidelines

The AHA/ERC Guidelines parameter allows you to specify which edition of the AHA/ERC Guidelines the unit follows.

The values for the AHA/ERC Guidelines parameter are:

<b>Possible Values</b>	2005, 2010, 2015
<b>Default</b>	2010

### CPR Time

The CPR Time parameter allows you to set the CPR time.

The values for the CPR Time parameter are:

<b>Possible Values</b>	1 min, 1.5 min, 2 min, 2.5 min, 3 min, 3.5 min, 4 min
<b>Default</b>	2 min

## Enable Metronome

This parameter allows you to select which modes you want the CPR metronome enabled: Never (no modes), Always (Manual, Analysis/CPR Protocol, and AED modes), and AED Mode Only. This parameter works in conjunction with the Constant Metronome parameter, and the mode in which the unit is operating determines how these parameters function together. The following paragraphs and "CPR Metronome Activity" on the facing page provide more detailed information.

### Enable Metronome Set to Never

The metronome is disabled in all modes.

### Enable Metronome Set to Always

When Enable Metronome is set to Always and Constant Metronome is Enabled, the metronome is on when CPR is detected, and off when CPR is idle in all modes.

When Enable Metronome is set to Always and Constant Metronome is Disabled:

- **With AHA/ERC 2005/2010 Guidelines** – If Enable Metronome is set to Always, the metronome is active only when the reported compression rate falls below 80 cpm during the CPR period. If the chest compression sensor is connected, the metronome is suspended after compressions have not been detected for at least 2 seconds.
- **With AHA/ERC 2015 Guidelines Enabled** – If Enable Metronome is set to Always, the metronome is only active when the reported compression rate falls above or below the 2015 guideline range of 100-120 cpm during the CPR period. If the chest compression sensor is connected, the metronome is suspended after compressions have not been detected for at least 2 seconds.
- **AED Mode** – Metronome is on at the start of CPR period.

### Enable Metronome Set to AED Mode Only

When Enable Metronome is set to AED Mode Only and Constant Metronome is Enabled:

- **Manual Mode Analysis/CPR Protocol Mode** – No metronome.
- **AED Mode** – Metronome is on when CPR is detected, and off when CPR is idle.

When Enable Metronome is set to AED Mode Only and Constant Metronome is Disabled:

- **Manual Mode Analysis/CPR Protocol Mode** – No metronome.
- **AED Mode** – Metronome is on at the start of CPR period.

The values for the Enable Metronome parameter are:

<b>Possible Values</b>	Never, Always, AED Mode Only
<b>Default</b>	Never

## CPR Metronome Activity

Enable Metronome Setting	AED Mode	Analysis/CPR Protocol Mode	Manual Mode
<b>Constant Metronome Enabled</b>			
<b>AED Mode Only</b>	On when CPR detected Off when CPR Idle	<b>Off</b>	Off
<b>Always</b>	On when CPR detected Off when CPR Idle	<b>On when CPR detected Off when CPR Idle</b>	On when CPR detected Off when CPR Idle
<b>Never</b>	Off	<b>Off</b>	Off
<b>Constant Metronome Disabled</b>			
<b>AED Mode Only</b>	On at start of CPR period	<b>Off</b>	Off
<b>Always</b>	On at start of CPR period	<b>With AHA/ERC 2005 or 2010 Guidelines: On only at &lt;80 compressions per minute. With AHA/ERC 2015 Guidelines: On when compression rate falls above or below 100-120 compressions per minute.</b>	With AHA/ERC 2005 or 2010 Guidelines: On only at <80 compressions per minute. With AHA/ERC 2015 Guidelines: On when compression rate falls above or below 100-120 compressions per minute.
<b>Never</b>	Off	<b>Off</b>	Off



## Constant Metronome

This parameter allows you to enable or disable the constant metronome. This parameter works in conjunction with the Enable Metronome parameter, and the mode in which the unit is operating (Manual, Analysis/CPR Protocol, or AED) determines how these parameters function together. When the Enabled Metronome parameter is set to Never, Constant Metronome is disabled. The following paragraphs and "CPR Metronome Activity" on the previous page provide more detailed information.

### Constant Metronome Enabled

When Constant Metronome is Enabled and Enable Metronome is set to Always, the metronome is on when CPR is detected, and off when CPR is idle in all modes.

When Constant Metronome is Enabled and Enable Metronome is set to AED Mode Only:

- **Manual Mode and Analysis/CPR Protocol Mode** – No metronome.
- **AED Mode** – Metronome is on when CPR is detected, and off when CPR is idle.

### Constant Metronome Disabled

When Constant Metronome is Disabled and Enable Metronome is set to Always:

- **Manual Mode and Analysis/CPR Protocol Mode** -
  - With AHA/ERC 2005 or 2010 Guidelines: The metronome is only on when compressions are less than 80 per minute during CPR.
  - With AHA/ERC 2015 Guidelines: The metronome is only on when compressions fall above or below the range of 100-120 per minute during the CPR.
- **AED Mode** – Metronome is on at the start of CPR period.

When Constant Metronome is Disabled and Enable Metronome is set to AED Mode Only:

- **Manual Mode and Analysis/CPR Protocol Mode** – No metronome.
- **AED Mode** – Metronome is on at the start of CPR period.

The values for the Constant Metronome parameter are:

<b>Possible Values</b>	Enabled, Disabled
<b>Default</b>	Disabled

## Enable CPR Prompts

The Enable CPR Prompts parameter allows you to specify what CPR prompts are used. CPR prompts are only available when using Adult CPR electrodes.

The values for the Enable CPR Prompts parameter are:

<b>Possible Values</b>	Text and Voice, Text Only
<b>Default</b>	Text and Voice

## Display “Fully Release” Prompt

The Display “Fully Release” Prompt parameter allows you to enable or disable the “Fully Release” prompt. The “Fully Release” text prompt is only available when using Adult CPR electrodes.

The values for the Display “Fully Release” Prompt parameter are:

<b>Possible Values</b>	No, Yes
<b>Default</b>	Yes

## Log CPR Metrics

The Log CPR Metrics parameter allows you to specify whether or not to log CPR metrics.

The values for the Log CPR Metrics parameter are:

<b>Possible Values</b>	No, Yes
<b>Default</b>	Yes

## Auto Display Compression Trace

This parameter allows you to enable or disable the CPR Compression Bar Graph. When this parameter is enabled (set to Yes), the CPR Compression Bar Graph automatically displays when compressions are detected. The CPR Compression Bar Graph is only available when using Adult CPR electrodes.

The values for the Auto Display Compression Trace parameter are:

<b>Possible Values</b>	Yes, No
<b>Default</b>	Yes

## ResQCPR™

The ResQCPR parameter allows you to enable or disable the ResQCPR feature. The ResQCPR feature modifies Real CPR feedback for use with the ResQCPR system. When the ResQCPR parameter is enabled and the ResQCPR system is in use, a ResQCPR quick access key on the X Series unit allows you to switch from the CPR dashboard to the ResQCPR dashboard.

The values for the ResQCPR parameter are:

<b>Possible Values</b>	Disable, Enable
<b>Default</b>	Disable

## Communications Parameters


The Communication parameters allow you to view and modify functions related to unit communications. The main level parameters in this menu include:

Menu	Description
<b>Wireless</b>	Use to enable or disable wireless capability. When disabled, all internal wireless capabilities are disabled in the unit.
<b>Bluetooth</b>	Use to enable or disable Bluetooth capability. When disabled, all Bluetooth capabilities are disabled in the unit.
<b>Wi-Fi</b>	Use to enable or disable Wi-Fi and to configure access point profiles. When disabled, all internal Wi-Fi capabilities are disabled in the unit. See "Configuring Access Point Profiles" on page 192.
<b>Cellular</b>	Use to configure USB cellular modem or Bluetooth devices. See "Setting up Cellular Communication."
<b>Ethernet</b>	Use to enable or disable Ethernet capability. See Setting up an Ethernet Connection to configure your Ethernet connection.
<b>12-Lead Reports</b>	Use to configure the server, and view or update distribution lists. Storage and management of 12-lead reports and full disclosure case files on the unit can be managed from third-party software such as RescueNet <sup>®</sup> . See Configuring 12-Lead Report Transmissions.
<b>Disclosure Log</b>	Use to configure the server to which to send the log data. The unit allows you to send the disclosure logs and audio for up to 15 cases at one time to a remote server. See Configuring Disclosure Log Transmissions.
<b>Data Services</b>	Use to set up a password that clients must use to access the unit. See Setting Passwords.
<b>Clock Sync</b>	Use to configure Clock Synchronization. The Clock Synchronization feature allows you to synchronize the unit's internal real time clock to an external reference time source using Simple Network Time Protocol. See Configuring Clock Synchronization.
<b>Mobile Streaming</b>	Use to stream waveforms and physiological parameters for the patient being monitored.

<b>Menu</b>	<b>Description</b>
<b>Readiness Test</b>	Use to configure the server to which to send Readiness Test log results and to enable/disable the automatic transmission of Readiness Test logs. When Readiness Test is enabled X Series unit performs a self-test and transmits the results to a ZOLL Defib Dashboard server.

## Wireless

The Wireless parameter allows you to enable or disable wireless communications.


 **Note:** Disabling Wireless turns off all internal wireless capabilities.

The values for the Wireless parameter are:

<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Enabled

## Bluetooth

The Bluetooth parameter allows you to enable or disable Bluetooth communications.

 **Note:** This feature must be configured prior to use.

The values for the Bluetooth parameter are:

<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Disabled

## Wi-Fi

The WiFi parameter allows you to enable or disable WiFi communications, and if enabled, to configure access profiles.


 **Note:** This feature must be configured prior to use.

The values for the WiFi parameter are:

<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Enabled
<b>If Enabled</b>	Configure

## Power Management

The Power Management parameter allows you to enable/disable Wi-Fi power management. This parameter is located within the Configure Wi-Fi menu; to access, select uringure in the Wi-Fi parameter section when enabled.

 **Note:** This parameter is only applicable to X Series units with CP version 02.08.011.4084 andMP/PP version 02.18.03.00 or higher.

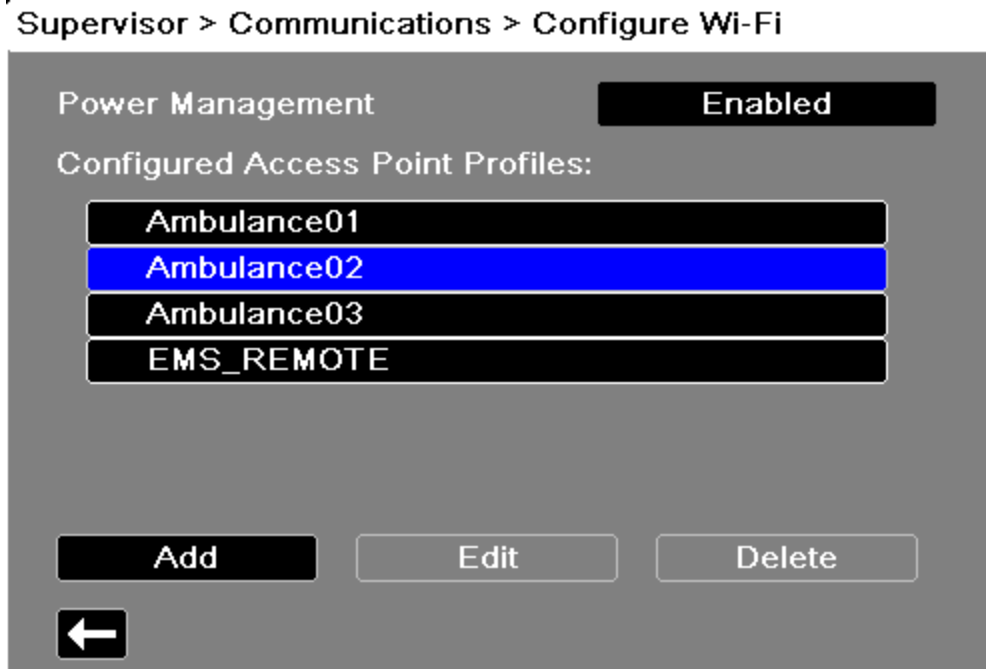
The values of the Power Management parameter are:


<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Enabled

## Configuring Access Point Profiles

To configure Wi-Fi Access Point Profiles:

1. Use the navigation keys to highlight and select **Wi-Fi Configure**. The Configure Wi-Fi dialog box displays.

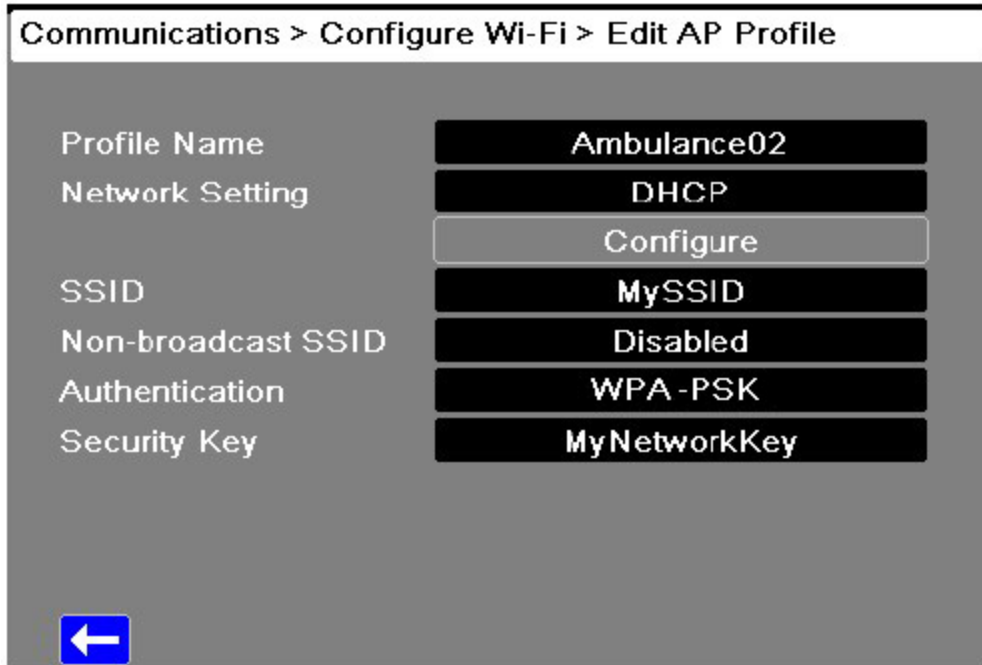


 **Note:** Selecting a profile in the list allows you to edit or delete the profile. It does not make a profile the active Wi-Fi profile selection.

2. If you would like to delete an existing profile use the navigation keys to select the desired profile (a green check mark identifies a selected profile) then navigate to and select **Delete**. After deleting a file, be sure to review the defined Wi-Fi profiles and update any which referred to the deleted file.
3. If you would like to:
  - Edit a profile use the navigation keys to select the profile (a green check mark identifies a selected profile) then navigate to and select **Edit**.
  - Add a new Access Point Profile, use the navigation keys to highlight and select **Add**.

The Edit AP Profile dialog box displays.







4. Enter a new or modify an existing profile name by navigating to and selecting **Profile Name**. The Profile Name dialog displays. Use the alphabetical keypad and quick access keys to enter the profile name then press **SAVE**. You can press **Cancel** to return to the Configure Wi-Fi menu without saving changes.
5. Specify that this profile is either DHCP or a Static IP by using the navigation keys to select **Network Setting** then choosing either **DHCP** or **Static IP** as appropriate.
6. If you selected Static IP, navigate to and select **Network Setting > Configure**. The Configure Static IP dialog displays. Use the numeric keypad to enter values for the IP Address, Subnet Mask, Default Gateway, Preferred DNS Server, and Alternate DNS Server then press **Save**.
7. Provide the SSID name by navigating to and selecting **SSID**. The SSID dialog box displays. Use the alphabetical keypad and quick access keys to enter the SSID name then press **SAVE**.
8. Navigate to and select **Non-broadcast SSID** then specify whether to enable or disable connection to non-broadcast or hidden SSIDs by selecting **Enabled** or **Disabled** as appropriate. For Wi-Fi networks configured not to broadcast their SSID, you must set this field to **Enabled** in order to allow the X Series unit to connect to the Wi-Fi network.
9. Navigate to and select **Authentication** and then select the authentication type. The X Series unit supports three types of Wi-Fi authentication: WPA-PSK (Wi-Fi Protected Access, Pre-shared key), WPA2-PSK (Wi-Fi Protected Access II, Pre-shared key), and Enterprise.

10. When finished adding or editing WiFi profiles, press the back arrow (⬅️) to return to the list of configured access point profiles. Press ⬅️ to return to the Communications menu.

If you choose	Then
<p><b>WPA-PSK</b> or <b>WPA2-PSK</b></p>	<p>You must provide a security key. Navigate to and select <b>Security Key</b>. The Security Key dialog displays. Enter a 8-64 character security key by using the alphabetical keypad then press <b>SAVE</b>.</p>
<p><b>Authentication</b></p>	<p>Further configuration is required. Use the navigation keys to select <b>Enterprise Settings</b> then select <b>Configure</b>. The Enterprise Config dialog displays. Provide the Identity, and Authentication Protocol (TLS or PEAP). Some fields will be grayed out, depending on the Authentication Protocol that you choose.</p> <p>If you select PEAP (Protected Extensible Authentication Protocol), you must enter the Password corresponding to the Identity entered. If the network requires it, you may enter an Anonymous Identity. The X Series unit only supports PEAPv0/v1 + MSCHAPV2</p> <p>If you select TLS (Transport Layer Security), you must select a Client Certificate and enter the Private Key Password corresponding to the private key in the Certificate file.</p> <p>For TLS client certificates, you can choose from a list of pre-loaded files. The X Series unit only supports PFX format client certificates. To load a new certificate from a USB device:</p> <ol style="list-style-type: none"> <li>a. Select <b>Manage Client Certificates</b>. A list of existing certificates displays.</li> <li>b. Select <b>Load from USB</b>. A list of files on the USB device displays. Filenames can only be 24 characters long. Filenames longer than 24 characters will not appear in the list.</li> <li>c. Use the arrow keys to select the desired file then select <b>Load from USB</b>. Only one file can be selected at a time.</li> <li>d. After pressing <b>Load Selected</b>, press the back arrow (⬅️) to view the list of all currently loaded certificates and keys.</li> </ol>

If you choose	Then
	<p>e. Press  to return to the Enterprise Config menu, and  again to return to the Add Access Point Profile menu.</p> <p>The X Series provides pre-loaded certificate files for common certificate authorities. For organizations that act as their own CA or use a CA that the X Series does not provide, the X Series unit allows you to load your own CA certificates. To load a new CA certificate:</p> <ol style="list-style-type: none"> <li>Insert the USB device with the CA certificates into the USB port on the right side of the unit.</li> <li>Select <b>Load CA Certificate from USB</b>. A list of files on the USB device displays. The X Series supports PEM, DER, and P7B CA certificate formats.</li> <li>Use the arrow keys to select the desired file then select <b>Load Selected</b>. Only one file can be selected at a time.</li> <li>When the Certificate Loaded dialog box displays, select <b>OK</b> to confirm.</li> </ol>

## Cellular

The Cellular parameter allows you to perform the configuration of cellular connectivity. This includes Bluetooth phone pairing operations, setup for cellular service providers, and selections for USB cellular modem usage.

 **Note:** This feature must be configured prior to use.

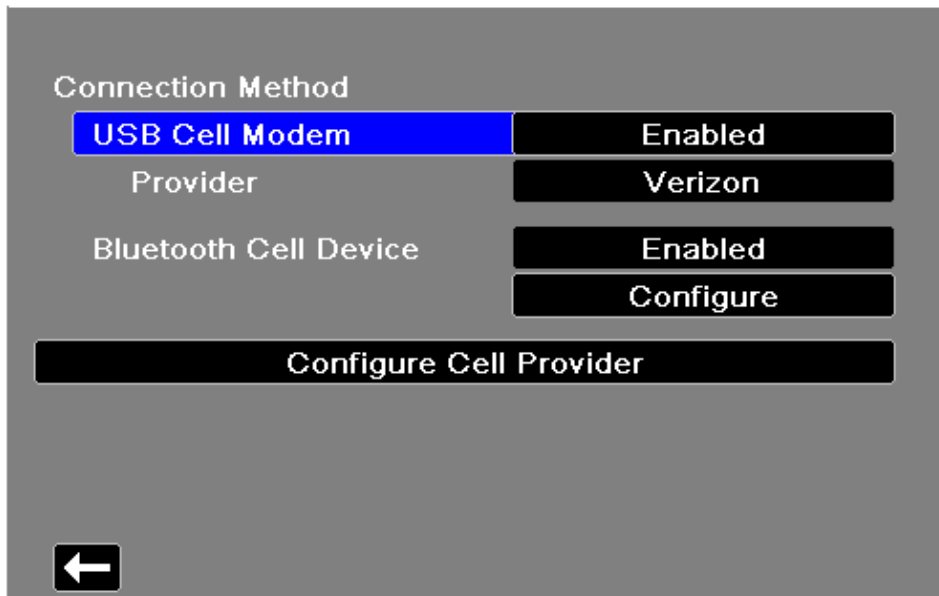
The values for the Cellular parameter are:

<b>If Enabled</b>	Configure
-------------------	-----------

You can configure your USB cellular modem or Bluetooth device to work with the X Series unit.

Under the Communications menu, select **Cellular Configure**. The Cellular menu appears.

## Supervisor &gt; Communications &gt; Cellular



You can use the arrow keys to enable or disable all cellular functions, and configure your cell phone provider information.

### Configuring Cell Phone Provider Information

You can create up to three cell phone providers. Use the arrow keys to enter information about your cell phone provider:


- **Provider Name** – Provider name is an identifier you choose to refer to this cell phone provider.
- **Call Number** – Call number is an access number sometimes referred to as a Dial String.
- **Account Name and Password** – Some providers require an account name and password. If your provider does not require these fields, leave them blank.

### Configuring and Pairing Bluetooth Devices

Use Bluetooth devices with DUN or PAN-NAP profiles only. Not all cellular phones transmit reliably; contact your local ZOLL Medical Corporation sales representative for a list of approved devices.

To pair a Bluetooth device:


1. Select **Bluetooth Cell Device Configure** in the Cellular menu.
2. Use the navigation keys and select **New**. The unit scans for and lists nearby Bluetooth devices that are in discoverable mode.
3. Use the navigation keys to select the desired device. A green check mark indicates which device has been selected.

4. It may be necessary to change the PIN on the X Series unit. Check your device's documentation. To change the PIN, select **Change Pin** in the Pair New Device menu, then use the numerical keypad to enter the desired PIN.
5. Select **Pair Now** to pair the device.
6. On your Bluetooth device, accept the pairing request and enter the PIN, if prompted. The X Series unit then returns to the list of paired devices.
7. You can then edit the settings of the paired device by selecting **Edit** and giving the device an optional nickname or setting the provider. A provider is not required for Bluetooth devices using the PAN-NAP profile. Press the back arrow () to return to the list of paired devices.

## Ethernet


You can use an Ethernet adapter to transfer data to a PC via an Ethernet cable.

1. In the Communications menu, select **Ethernet Configure**.
2. Use the navigation keys to select either **DHCP** or **Static IP**. If you select **Static IP**, use the numeric keypad to enter values for the IP Address, Subnet Mask, Default Gateway, Preferred DNS Server, and Alternate DNS Server.

 **Note:** If you are using an Ethernet adapter to transfer data to a PC, ZOLL recommends using the Static IP Address 169.254.1.250 and the Subnet Mask 169.254.1.250

## 12-Lead Reports

The Reports parameter allows you to configure the sending of 12-Lead reports. This includes configuring the RescueNet report server as well as customer account credentials.

 **Note:** This feature must be configured prior to use.

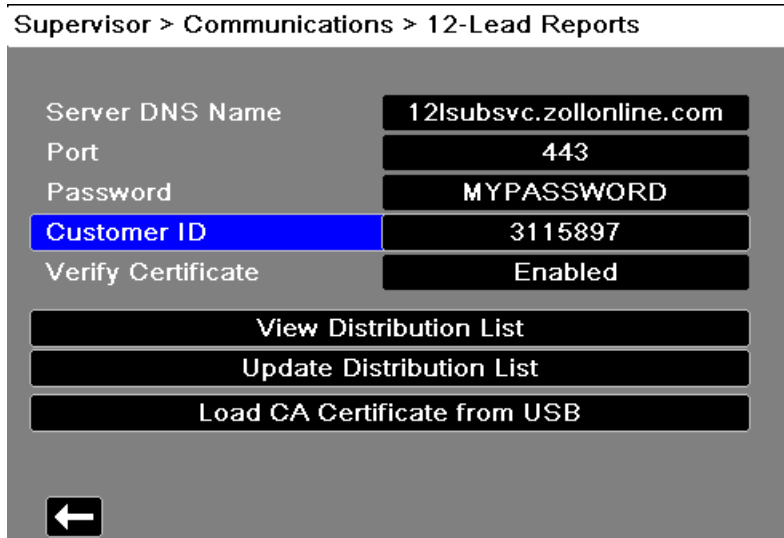
The values for the Reports parameter are:

<b>If Enabled</b>	Configure
-------------------	-----------

The device can send 12-lead reports to the ZOLL RescueNet software. Distribution List entries defined in your RescueNet account specify possible report destinations, each of which consists of one or many recipients such as email addresses and fax machines. You must have a RescueNet account set up before you can complete configuration of the device.

To configure 12-Lead reports transmissions:


1. In the Communications menu, select **12-Lead Reports Configure**.



2. Enter your **RescueNet Customer ID** and **Password** in the fields provided.
3. In the **Verify Certificate** field specify whether or not you want to Enable or Disable (default) certificate verification for the RescueNet 12-lead server. If the **Verify Certificate** field is set to **Enabled**, when the X Series unit establishes a connection to the RescueNet 12-Lead Server it verifies the server's certificate and identity before the 12 Lead transmission can proceed. If the verification fails, the unit displays a status message indicating whether the failure was a result of certificate or identity validation. Enabling this option improves the security of the connection by confirming that the unit is communicating with the actual RescueNet server.



**Note:** The X Series comes with certificates file pre-loaded for common Certificate Authorities, including the CA used by the RescueNet server. All certificates, however, have expiration dates. It may be necessary to update the CA certificate in order to maintain the ability to successfully verify the RescueNet server's identity. Complete the following to update the CA certificate used to verify the RescueNet server:


- a. Insert a USB device with the certificates in the USB port on the right side of the X Series device.
  - b. Select the **Load CA Certificate from USB** field. The **Load from USB** window displays with a list of available Root CA certificate files.
  - c. In the **Files Available:** field select the desired certificate.
  - d. Select **Load Selected** field. A list of files on the USB device displays.
  - e. Use the arrow keys to select the desired certificate file then select **Load Selected**.
  - f. Press  to return to the 12-Lead Reports menu.
4. Before you can transmit 12-lead reports, you must download the current Distribution List for your account from the RescueNet server. If you have already configured your wireless preferences, you can use the **Update Distribution List** button to complete the download. The X Series retains the current Distribution List until a new one is downloaded. If you modify the Distribution List entries using RescueNet, you should download a new copy to the X Series device.
  5. When you are done entering data, press the back arrow to return to the Supervisor>Communications menu.

## Disclosure Log

The X Series unit continuously stores information in a full disclosure case log for monitored patients. The unit can maintain up to 150 full disclosure cases that contain:

- Treatment events
- Trends
- ECG and other continuous waveforms
- Monitoring and event snapshots
- 12-lead snapshots and analysis.

For systems with a Disclosure Log server configured, the X Series unit allows you to wirelessly transmit the full Disclosure case logs and audio for up to 15 cases to a remote server for subsequent retrieval. The Disclosure Log parameter allows you to configure the remote server to which to wirelessly send case disclosure logs.

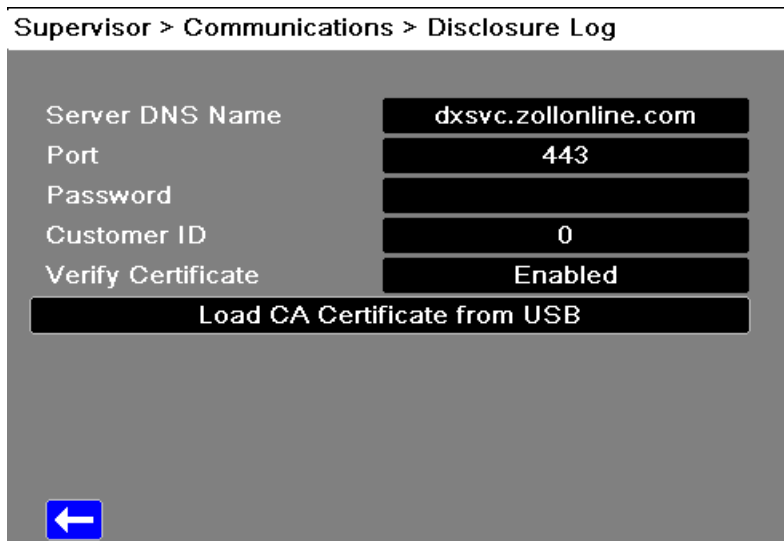
 **Note:** This feature must be configured prior to use.

The values for the Disclosure Log parameter are:

<b>If Enabled</b>	Configure
-------------------	-----------

To configure the remote server:


1. Under the Communications menu, select **Disclosure Log > Configure**. The Disclosure Log menu displays.





2. In the **Server DNS Name** field, enter the host name of the remote server to which to send the Log data.
3. Enter the **Port** to be used to connect to the server.
4. Enter your associated **Password** and **Customer ID** in the fields provided.



5. In the **Verify Certificate** field specify whether or not you want to Enable or Disable (default) certificate verification for the RescueNet server. If the **Verify Certificate** field is set to **Enabled**, when the X Series establishes a connection to the RescueNet server it verifies the server's certificate and identity before the Disclosure Log transmission can proceed. If the verification fails, the unit displays a status message indicating whether the failure was a result of certificate or identity validation. Enabling this option improves the security of the connection by confirming that the unit is communicating with the actual RescueNet server.

 **Note:** The X Series comes with certificates file pre-loaded for common Certificate Authorities, including the CA used by the RescueNet server. All certificates, however, have expiration dates. It may be necessary to update the CA certificate in order to maintain the ability to successfully verify the RescueNet server's identity. Complete the following to update the CA certificate used to verify the RescueNet server:

- a. Insert a USB device with the certificates in the USB port on the right side of the device.
  - b. Select the **Load CA Certificate from USB** field. The **Load from USB** window displays with a list of available Root CA certificate files.
  - c. In the **Files Available:** field select the desired certificate.
  - d. Select **Load Selected** field. A list of files on the USB device displays.
  - e. Use the arrow keys to select the desired certificate file then select **Load Selected**.
  - f. Press  to return to the Disclosure Log menu.
6. When you are done entering data, press the back arrow () to return to the Supervisor>Communications menu.

## Data Services

For X Series devices interfacing with ePCR (electronic Patient Care Reporting) software, the Data Services parameter allows you to set the password necessary for clients to use before they can access data from the X Series device. Clients that fail to provide the correct password will be denied data access to the X Series.

From the Data Services menu you can:

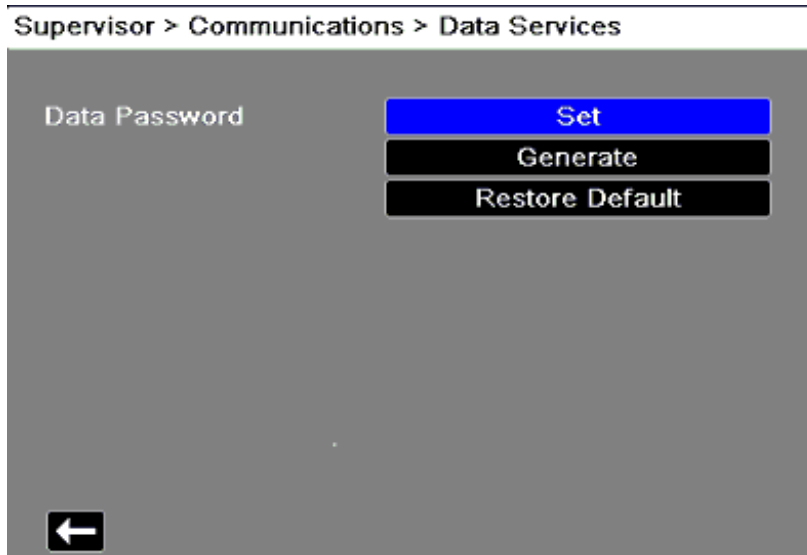
- Set your own password.
- Automatically generate password.
- Reset current password back to the default.


**i Important:** For security ZOLL recommends setting your own password. When you set your own password you need to configure the same password in the ePCR software. Be sure the password you choose is sufficiently strong. Consider the following recommendations when setting passwords:

- Use a minimum of 16 characters.
- Use one uppercase and one lowercase character.
- Use one special character for example, !#\$%.
- Avoid patterns and character repetitions.
- Avoid common phrases or words associated with your institution.
- Avoid common passwords such as email and computer login passwords.
- Generate random passwords whenever possible.

To configure passwords:

1. Under the Communications menu, select **Data Services > Configure**. The Data Services menu displays.



2. If you would like to create your own password:
  - a. Select the **Set** field. The Password menu displays.
  - b. Use the alphabetical keypad and quick access keys to specify a password of at least 8 characters in length. Be sure to make the password you supply is sufficiently strong. See password recommendations above.
  - c. Press **SAVE**. You can press **Cancel** to return to the Data Services menu without saving changes.
3. If you would like to have the X Series automatically generate a password for you:
  - a. Select the **Generate** field. The Password menu displays with a random password included.
  - b. Modify the password, if desired. Passwords must be at least 8 characters long. Be sure to make the password you supply is sufficiently strong. See password recommendations above.
  - c. Select **SAVE**.
4. If you would like to restore the password to its default:
  - a. Select the **Restore Default** field.
  - b. On the confirmation dialog box that displays, select **OK**.
5. When you are done with the Data Services menu press  to return to the Supervisor Communications menu.

## Clock Sync

The Clock Synchronization feature allows you to synchronize the X Series unit's internal real time clock to an external reference time source using Simple Network Time Protocol (SNTP). SNTP servers provide Coordinated Universal Time (UTC) which is the primary time standard by which the world regulates clocks and time. In order to convert this standard time to the local time, the X Series allows you to configure a timezone offset. A timezone offset is the difference in hours and quarter-hours from UTC time for a particular locale. The timezone offset is a positive number if the local timezone is ahead of UTC and a negative number if it is behind.

Additionally, for locations that observe Daylight Saving Time, the X Series provides a setting that, when set to On, immediately applies an additional 1-hour positive offset from UTC. The supervisor sets the initial value and the operator may subsequently toggle Daylight Saving Time on or off as necessary on the Set Date and Time screen.

When Clock Sync is enabled and a network connection is available, the X Series unit automatically acquires a reference time from the SNTP server and converts the reference time to local time. The X Series will acquire a reference time from the SNTP server if no reference time has been acquired since the unit was powered on or the Clock Sync configuration settings have been changed. To ensure that the real time clock never changes during patient treatments, the X Series will make adjustments to its clock, if necessary, after the unit has been off for at least two minutes and prior to the start of a new case.

When Clock Sync is enabled, you can see the time of the last synchronization on the Set Date and Time screen. The X Series also provides the message *CLOCK SYNCHRONIZATION FAILED* when an attempt at synchronization fails after the SNTP server settings have changed or if there has been no successful synchronization for 1 week or more. See the X Series Operator's Guide for information on using the Set Date and Time screen.


To configure clock synchronization:

1. Under the Communications menu, select **Clock Sync > Configure**. The Clock Synchronization menu displays.

Supervisor > Communications > Clock Sync	
Clock Sync	SNTP
Time Server Name	TIME.EXAMPLE.COM
Time Server Port	123
Daylight Saving Time	Off
Time Zone Offset Hours	00
Time Zone Offset Mins.	00


2. In the **Clock Sync** field, specify whether or not to synchronize the X Series internal real time clock to an external time source.
  - Select **SNTP** if you would like to synchronize the X Series clock to an external time source.
  - Select **None** (default) if you do not wish to synchronize the X Series internal real time clock to an external source.
3. In the **Time Server Name** field, specify the time server to use for clock synchronization by either entering the host name or an IPv4 address for the server.
4. In the **Time Server Port** field, enter a numeric UDP port number for connecting to the external server. The default is 123.
5. In the **Daylight Saving Time** field, indicate whether to use Daylight Saving Time or not by selecting **On** or **Off** (default) as appropriate. Adjustments to Daylight Saving Time take effect immediately and must be manually adjusted at every transition between Standard Time and Daylight Saving Time. The Daylight Saving Time offset is zero if Daylight Saving Time is set to **Off** and 60 minutes if Daylight Saving Time is set to **On**.

**Note:** UTC time is a constant reference time. It does not change to reflect Daylight Saving Time or Summer Time. The Daylight Saving Time field allows you to accommodate locales that observe Daylight Saving Time or Summer Time. So, for example, UTC is 5 hours ahead of local time on the east coast of the United States during winter, but 4 hours ahead during summer.
6. Indicate the time zone offset value to use for your particular locale in the **Time Zone Offset Hours** (default 0) and **Time Zone Offset Mins.** (default 0) fields as appropriate.

7. When you are done entering data, press the back arrow () to return to the Supervisor > Communications menu. When changes are made on the Clock Sync menu the X Series attempts to synchronize its time if a network connection is available. To ensure the real time clock never changes during patient treatments, any necessary clock synchronization corrections will not occur, however, until the unit has been off for at least two minutes and prior to the start of a new case.


## Mobile Streaming

The Mobile Streaming parameter allows the X Series to stream waveforms and physiologic data for remote viewing of the patient being monitored. This information can be viewed by a remote user via the ZOLL RescueNet Live Client application.

 See the ZOLL *RescueNet® Live User Guide* for information on configuring the remote view server and viewing patient data remotely.

The values for the Mobile Streaming parameter are:

<b>Possible Values</b>	Disabled, Enabled
<b>Default</b>	Disabled
<b>If Enabled</b>	Configure

 When using the RescueNet Live feature the following configuration settings must be made for X Series devices connected in a wired configuration via an Ethernet switch, Wireless communication must be disabled. Conversely, Ethernet communication must be disabled for devices connected via a wireless connection. See "Wi-Fi" on page 190 and "Ethernet" on page 197 for information on enabling/disabling Wi-Fi and Ethernet communications.

 Ensure that **Continuous Waveform Recording** is enabled on the device, and **Record Displayed Waveforms** is set to **All Displayed Waveforms**.

To configure the X Series for remote view:

1. Enable RescueNet Live in the Communications menu by selecting **Mobile Streaming > Enabled**.
2. Select **Mobile Streaming > Configure**. The Mobile Streaming menu displays.
3. In the **Server DNS Name** field, enter the host name of the remote server.
4. Enter the **Port** to be used to connect to the server.
5. Enter your associated **Password** and **Customer ID** in the fields provided.

6. In the **Verify Certificate** field specify whether or not you want to **Enable** or **Disable** (default) certificate verification for the remote server. If the Verify Certificate field is set to **Enabled**, when the unit establishes a connection to the server it verifies the server's certificate and identity before proceeding. If the verification fails, the unit displays a status message indicating whether the failure was a result of certificate or identity validation. Enabling this option improves the security of the connection by confirming that the unit is communicating with the actual server.



**Note:** The unit comes with certificates file pre-loaded for common Certificate Authorities. All certificates, however, have expiration dates. It may be necessary to update the CA certificate in order to maintain the ability to successfully verify the server's identity. Complete the following to update the CA certificate used to verify the server:

- a. Insert a USB device with the certificates in the USB port on the right side of the unit.
  - b. Select the **Load CA Certificate from USB** field. The Load from USB window displays with a list of available Root CA certificate files.
  - c. In the **Files Available:** field select the desired certificate.
  - d. Select **Load Selected** field. A list of files on the USB device displays.
  - e. Use the arrow keys to select the desired certificate file then select **Load Selected**.
  - f. Press the back arrow to return to the Mobile Streaming menu.
7. When you are done with the Mobile Streaming menu press the back arrow to return to the Supervisor Communications menu.

## Readiness Test

The Readiness Test parameter allows you to enable or disable the automatic transmission of a Readiness Test log and to configure the ZOLL Defib Dashboard server to which to transmit readiness logs. When Readiness Test is enabled, the unit automatically transmits the results of the Readiness Test to a ZOLL Defib Dashboard server. A readiness test log is created whenever a 30J test is performed and includes the results of the most recent self-test.




**Note:** You can manually transmit and print the results of the Readiness Test in the **Setup > Device Info** menu. See "Device Info" on page 22 for details.

To configure Readiness Test transmissions:

1. From the Communications menu, select Readiness Test > Configure. The Readiness Test screen displays.
2. Enable or disable the automatic transmission of a Readiness Test log to a configured server by selecting the **Auto Transmit Results** button then specifying **Enable** or **Disable** as appropriate.



3. In the **Server DNS Name** field, enter the host name of the remote server.
4. Enter the **Port** to be used to connect to the server.
5. Enter your associated **Password** and **Customer ID** in the fields provided.
6. In the **Verify Certificate** field, specify whether or not you want to **Enable** or **Disable** (default) certificate verification for the remote server. If the **Verify Certificate** field is set to **Enabled**, when the unit establishes a connection to the server it verifies the server's certificate and identity before proceeding. If the verification fails, the unit displays a status message indicating whether the failure was a result of certificate or identity validation. Enabling this option improves the security of the connection by confirming that the unit is communicating with the actual server.  
  
 **Note:** The unit comes with certificate files pre-loaded for common Certificate Authorities. All certificates, however, have expiration dates. It may be necessary to update the CA certificate in order to maintain the ability to successfully verify the server's identity. Complete the following to update the CA certificate used to verify the server:
  - a. Insert a USB device with the certificates in the USB port on the right side of the unit.
  - b. Select the **Load CA Certificate from USB** field. The Load from USB window displays with a list of available Root CA certificate files.
  - c. In the **Files Available:** field select the desired certificate.
  - d. Select **Load Selected** field. A list of files on the USB device displays.
  - e. Use the arrow keys to select the desired certificate file then select **Load Selected**.
  - f. Press the back arrow to return to the Readiness Test screen.
7. When you are done with the Readiness Test screen press the back arrow to return to the Supervisor Communications menu.

## Clinical Dashboards

The Clinical Dashboards parameters allow you to enable/disable the TBI Dashboard feature and view and configure the TBI Dashboard feature. The main level parameters in this menu include:

- TBI Enable/Disable
- TBI Configure

### TBI

The TBI parameter allows you to enable or disable the TBI Dashboard feature on the X Series unit. When set to Enable the TBI Configure parameters are available to view and modify. When set to Disable the TBI Configure parameters are not accessible.

The TBI Dashboard feature provides graphical trend data and ventilation assistance relevant to management of a TBI patient.

The values for the TBI parameter are:

<b>Possible Values:</b>	Enable, Disable
<b>Default:</b>	Enable

### TBI Configure

The TBI Configure parameters allow you to view and modify functions related to the TBI Dashboard feature. Protocol limits for Systolic Blood Pressure, EtCO<sub>2</sub> and SpO<sub>2</sub> are for use in Adult mode only.

#### Target Breath Rate

The Target Breath Rate parameter allows you to set a target breath rate value to display when entering the TBI Dashboard.

Target breath rates are configurable for Adult mode only. Pediatric breath rates are set 20 BPM and Neonate are set to 25 BPM by default.

The values for the adult Target Breath Rate parameter are:

<b>Possible Values:</b>	8 BPM, 9 BPM, 10 BPM, 11 BPM, 12 BPM, 14 BPM, 16 BPM, 20 BPM, 25 BPM, OFF
<b>Default:</b>	10 BPM

**SBP Lower Limit**

The SBP Lower Limit parameter allows you to set a systolic blood pressure lower protocol limit value to display when entering the TBI Dashboard.

The values for the Target Systolic Blood Pressure parameter are:

<b>Possible Values:</b>	80 to 130 mmHg (increments of 5 mmHg)
<b>Default:</b>	90 mmHg

**EtCO2 Upper Limit**

The EtCO2 Upper Limit parameter allows you to set an EtCO2 upper protocol limit value to display when entering the TBI Dashboard.

The values for the EtCO2 Upper Limit parameter are:

<b>Possible Values:</b>	35 to 50 mmHg
<b>Default:</b>	45 mmHg

**EtCO2 Lower Limit**

The EtCO2 Lower Limit parameter allows you to set an EtCO2 lower protocol limit value to display when entering the TBI Dashboard.

The values for the EtCO2 Lower Limit parameter are:

<b>Possible Values:</b>	25 to 40 mmHg (increment of 1 mmHg)
<b>Default:</b>	35 mmHg

**SpO2 Lower Limit**

The SpO2 Lower Limit parameter allows you to set an SpO2 lower protocol limit value to display when entering the TBI Dashboard.

The values for the SpO2 Lower Limit parameter are:

<b>Possible Values:</b>	80 to 100% (increments of 1%)
<b>Default:</b>	90%

## Service Parameters

The Service parameters allow you to view and modify functions related to maintenance of the X Series unit. The main level parameters in this menu include:

- Device Tests
- Device Configuration
- Update/Upgrade
- Diagnostic
- Device Monitoring
- Research Options
- Service Code

### Device Tests

The Device Tests are to be used to ensure that the X Series unit is operating at optimal efficiency.

<b>Possible Tests</b>	Keypad Test, LED Test, LCD Test, RFU Indicator Test, Audio Test, Printer Test, Battery Test, Fan Test, NIBP Test, USB Test
-----------------------	--

### Device Configuration

The Device Configuration displays technical information about the X Series unit and its external equipment.

### Update/Upgrade

The Update/Upgrade option allows you to make needed modifications to the X Series unit to keep it up to date.

### Diagnostic

The following options allow you to set and view information on the X Series unit's performance.

#### ECG

The following options control values related to ECG diagnostics.

#### General > Resp Breath Marker

The Resp Breath Marker parameter allows you to enable or disable Resp Breath Marker.

The values for the Resp Breath Marker parameter are:

<b>Possible Values</b>	On, Off
<b>Default</b>	Off

### **Error Counts**

This displays the number of ECG errors made by the unit.

### **NIBP**

The following displays information related to NIBP diagnostics.

#### **General**

This displays basic information on the unit's NIBP equipment and software.

#### **Calibration Info**

This displays information on the unit's calibration software.

#### **Reading Counts**

This displays the number of readings related to NIBP monitoring.

#### **Cycle/Error Counts**

This display the number of errors related to NIBP monitoring.

### **NIBP Test**

This allows you to test the NIBP system.

### **CO2**

This displays information related to CO2 diagnostics.

### **SpO2**

The following displays information related to SpO2 diagnostics.

### **Version Info**

This displays technical SpO2 information on the current version of the X Series unit.

### **Error Counts**

This displays the number of SpO2 errors made by the unit.

### **Temp/IBP**

This displays information related to Temp/IBP diagnostics.

### **Error Counts**

This displays the number of Temp/IBP errors made by the unit.

### **Defib/Pacer**

The following displays information related to Defib/Pacer diagnostics.

**Version Info**

This displays technical Defib/Pacer information on the current version of the unit.

**Cycle Counts**

This displays the number of cycles made by the unit.

**Error Counts**

This displays the number of Defib/Pace errors made by the unit.

**Communications**

This allows you to securely transfer communication system logs in encrypted format to a USB device.

**Device Monitoring**

The Device Monitoring screen displays the number of time the X Series unit is used, the amount of time it has been on, and the number of times it went over temperature.

**Research Options**

The Waveform Recording Sample Rate parameter allows you to set the waveform recording sample rate.

**Waveform Recording Sample Rate**

The values for the Waveform Recording Sample Rate parameter are:

<b>Possible Values</b>	250 Hz, 500 Hz
<b>Default</b>	250 Hz

**Service Code**

The Service Code parameter allows you to set the Service Code.

The values for the Service Code parameter are:

<b>Possible Values</b>	Numeric
<b>Default</b>	<blank>

# APPENDIX A

## Configuration Tables

This appendix provides tables that show the range of configuration parameters and default values.

This appendix includes tables containing configuration parameters for the following menus:

- **Setup Menu** – Contains setup configuration options such as HR/PR tone, print speed, and trend display format.
- **Parameter Menus** – Contain configuration options for HR/PR, NIBP, Resp, SpO2, Temp, and IBP.
- **Supervisor Menu** – These menus contain default settings for alarms, treatment options, defibrillator/pacer, ECG, NIBP, printer, display, AED, CPR, communications, and service. Accessible only to authorized users.

## Setup Menu

The following table includes the parameter ranges and default values for the Setup menu:



Menu	Submenu	Parameter Name	Default Value	Parameter Values
Setup	ECG	Filter Response	Monitor	Limited, Monitor
		HR/PR Tone	On	On, Off
		Resp Monitoring	On	On, Off
		Resp Lead	Lead II (RA-LL)	Lead I (RA-LA), Lead II (RA-LL)
		Patient Pace Marker	On	On, Off
		ECG Sweep Speed	25 mm/s	25 mm/s, 50 mm/s
	NIBP	NIBP Cuff Inflation Target	<b>Adult:</b> 160 <b>Pediatric:</b> 120 <b>Neonate:</b> 90	<b>Adult:</b> 120, 140, 160, 180, 200, 220, 240, 260 <b>Pediatric:</b> 80, 90, 100, 110, 120, 130, 140, 150 <b>Neonate:</b> 60, 70, 80, 90, 100, 110, 120, 130
	Display/Volume	Display Brightness	70%	10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%
		HR/PR Tone	On	On, Off
		Volume	Medium	Low, Medium, High
	Printer	Print Speed	25 mm/s	25 mm/s, 50 mm/s
		Print Number of Traces	3	1, 2, 3, 4
		Print Grid	On	On, Off
		Print on Snapshot	Off	On, Off
		Print on Patient Alarm	Off	On, Off
		Print on NIBP	Off	On, Off
		Print on Trend	Off	On, Off

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
	Trends	Trend Display Format	NIBP	Resp, SpO2, SpHb, Temp, P1, P2, P3, NIBP
		Trend Display Interval	5 min	30 sec, 1 min, 5 min, 10 min, 15 min, 30 min, 60 min
		Trend on Alarm	Off	On, Off
	Operational Tests	Keypad Test		
		LED Test		
		LCD Test		
		RFU Indicator Test		
		Audio Test		
		Printer Test		
	Device Info	Readiness Test		
		Log Review		
		Application Version		
		Serial Number		
Unit ID				
Contact Telephone				

# Parameter Menus

The following table includes parameter ranges and default values for the Parameter menus:

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
HR/PR	HR/PR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 120 <b>Pediatric:</b> 150 <b>Neonate:</b> 200	32-300
		Lower Limit	<b>Adult:</b> 50 <b>Pediatric:</b> 50 <b>Neonate:</b> 100	30-300
		Extreme Brady/Tachy Alarms	Tachy: +20 Brady: -10	Tachy: +5-+30 (by increments of 5) Brady: -5--30 (by increments of 5)
		LTA Monitoring	Off	On, Off
		HR/PR Tone	On	On, Off
		HR/PR Selected Source	ECG	ECG, SpO2, P1, P2, P3
		ECG Sweep Speed	25 mm/s	25 mm/s, 50 mm/s

Menu	Submenu	Parameter Name	Default Value	Parameter Values
NIBP	NIBP Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 220 <b>Pediatric:</b> 145 <b>Neonate:</b> 100	<b>Adult:</b> 32-260 <b>Pediatric:</b> 32-160 <b>Neonate:</b> 22-120
		Lower Limit	<b>Adult:</b> 75 <b>Pediatric:</b> 75 <b>Neonate:</b> 50	<b>Adult:</b> 30-258 <b>Pediatric:</b> 30-158 <b>Neonate:</b> 20-118
	NIBP Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 110 <b>Pediatric:</b> 100 <b>Neonate:</b> 70	<b>Adult:</b> 22-220 <b>Pediatric:</b> 22-130 <b>Neonate:</b> 12-110
		Lower Limit	<b>Adult:</b> 35 <b>Pediatric:</b> 35 <b>Neonate:</b> 30	<b>Adult:</b> 20-218 <b>Pediatric:</b> 20-128 <b>Neonate:</b> 10-108

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
	NIBP MAP Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 120 <b>Pediatric:</b> 110 <b>Neonate:</b> 80	<b>Adult:</b> 25-230 <b>Pediatric:</b> 25-140 <b>Neonate:</b> 15-110
		Lower Limit	<b>Adult:</b> 50 <b>Pediatric:</b> 35 <b>Neonate:</b> 35	<b>Adult:</b> 23-228 <b>Pediatric:</b> 23-138 <b>Neonate:</b> 13-108
		NIBP Mode	Manual	Manual, Auto
		NIBP Auto Mode Interval	5 min	1 min, 2 min, 3 min, 5 min, 10 min, 15 min, 30 min, 60 min
		SmartCuf On/Off	On	On, Off

Menu	Submenu	Parameter Name	Default Value	Parameter Values
Resp	RR/BR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 50 <b>Pediatric:</b> 50 <b>Neonate:</b> 80	5-150
		Lower Limit	<b>Adult:</b> 3 <b>Pediatric:</b> 3 <b>Neonate:</b> 12	0-145
		No Breath Alarm	<b>Adult:</b> Off <b>Pediatric:</b> Off <b>Neonate:</b> Off	<b>Adult:</b> Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec <b>Pediatric:</b> Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec <b>Neonate:</b> Off, 10 sec, 15 sec, 20 sec
		Resp Monitoring	On	On, Off
		Resp Lead	Lead II (RA-LL)	Lead I (RA-LA), Lead II (RA-LL)
		CO2/Resp Sweep Speed	12.5 mm/s	3.13 mm/s, 6.25 mm/s, 12.5 mm/s

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
SpO2	SpO2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 100 <b>Pediatric:</b> 100 <b>Neonate:</b> 95	52-100
		Lower Limit	85	50-98



Menu	Submenu	Parameter Name	Default Value	Parameter Values
	SpCO Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 10 <b>Pediatric:</b> 10 <b>Neonate:</b> 10	2-100
		Lower Limit	<b>Adult:</b> 0 <b>Pediatric:</b> 0 <b>Neonate:</b> 0	0-98
	SpMet Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 3.0 <b>Pediatric:</b> 3.0 <b>Neonate:</b> 3.0	2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0-100.0
		Lower Limit	<b>Adult:</b> 0.0 <b>Pediatric:</b> 0.0 <b>Neonate:</b> 0.0	0.0, 0.5, 1.0, 1.5, 2.0, 2.5, 3.0, 3.5, 4.0, 4.5, 5.0, 5.5, 6.0, 6.5, 7.0, 7.5, 8.0, 8.5, 9.0, 9.5, 10.0-98.0

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
	SpHb Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 17.0 gdL 11.0 mmol/L <b>Pediatric:</b> 17.0 gdL 11.0 mmol/L <b>Neonate:</b> 17.0 gdL 11.0 mmol/L	gdL: 2 to 25 mmol/L: 2 to 15.5
		Lower Limit	<b>Adult:</b> 7.0 gdL 4.0 mmol/L <b>Pediatric:</b> 7.0 gdL 7.0 mmol/L <b>Neonate:</b> 7.0 gdL 7.0 mmol/L	gdL: 0 to 24.9 mmol/L: 0 to 15.4

Menu	Submenu	Parameter Name	Default Value	Parameter Values
	SpOC Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 25 ml/dL <b>Pediatric:</b> 25 ml/dL <b>Neonate:</b> 25 ml/dL	0.2 to 35 ml/dL
		Lower Limit	<b>Adult:</b> 10 ml/dL <b>Pediatric:</b> 10 ml/dL <b>Neonate:</b> 10 ml/dL	0 to 34.9 ml/dL
	PVI Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 40% <b>Pediatric:</b> 40% <b>Neonate:</b> 40%	2 to 100%
		Lower Limit	<b>Adult:</b> 5% <b>Pediatric:</b> 5% <b>Neonate:</b> 5%	0 to 98%

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values	
	PI Alarm	Upper Limit Enable	Off	On, Off	
		Lower Limit Enable	Off	On, Off	
		Upper Limit	20%	0.2 to 20%	
		Lower Limit	0%	0 to 19.8%	
		SpCO Monitoring		Off	On, Off
		SpMet Monitoring		Off	On, Off
		SpHb Monitoring		Off	On, Off
		SpOC Monitoring		Off	On, Off
		PVI Monitoring		Off	On, Off
		PI Monitoring		Off	On, Off
		Averaging Time		8 seconds	4 seconds, 8 seconds, 16 seconds
		Sensitivity		Normal	Normal, Maximum
		SPHB Venous Mode		Off	On, Off
		SpHb Averaging Time		Long	Short, Medium, Long
	HR/PR Tone		On	On, Off	

Menu	Submenu	Parameter Name	Default Value	Parameter Values
Temp	T1 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 100.0 °C: 37.8	°F: 34.0-122.0 °C: 2.0-50.0
		Lower Limit	°F: 95.0 °C: 35.0	°F: 32.0-120.0 °C: 0.0-48.0
	T2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 100.0 °C: 37.8	°F: 34.0-122.0 °C: 2.0-50.0
		Lower Limit	°F: 95.0 °C: 35.0	°F: 32.0-120.0 °C: 0.0-48.0
	ΔT Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 5.0 °C: 2.8	°F: 0.2-90.0 °C: 0.2-50.0
		Lower Limit	°F: 0.0 °C: 0.0	°F: 0.0-89.8 °C: 0.0-49.8
		T1 Source Label	T1	T1, ART, CORE, ESOPH, RECT, SKIN, VEN, NASO
		T2 Source Label	T2	T2, ART, CORE, ESOPH, RECT, SKIN, VEN, NASO

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
IBP1	P1 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 220 <b>Pediatric:</b> 145 <b>Neonate:</b> 100	-28-300
		Lower Limit	<b>Adult:</b> 75 <b>Pediatric:</b> 75 <b>Neonate:</b> 50	-30-298
	P1 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 110 <b>Pediatric:</b> 100 <b>Neonate:</b> 70	-28-300
		Lower Limit	<b>Adult:</b> 35 <b>Pediatric:</b> 35 <b>Neonate:</b> 30	-30-298

Menu	Submenu	Parameter Name	Default Value	Parameter Values
	P1 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 120 <b>Pediatric:</b> 110 <b>Neonate:</b> 80	-28-300
		Lower Limit	<b>Adult:</b> 50 <b>Pediatric:</b> 50 <b>Neonate:</b> 35	-30-298
		Source Label	P1	P1, ABP, AO, ART, BAP, CVP, FAP, ICP, LAP, PAP, RAP, UAP, UVP
		Display Format	S/D (M)	S/D (M), S/D, (M) S/D, (M)

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
IBP2	P2 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 220 <b>Pediatric:</b> 145 <b>Neonate:</b> 100	-28-300
		Lower Limit	<b>Adult:</b> 75 <b>Pediatric:</b> 75 <b>Neonate:</b> 50	-30-298



Menu	Submenu	Parameter Name	Default Value	Parameter Values
	P2 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 110 <b>Pediatric:</b> 100 <b>Neonate:</b> 70	-28-300
		Lower Limit	<b>Adult:</b> 35 <b>Pediatric:</b> 35 <b>Neonate:</b> 30	-30-298
	P2 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 120 <b>Pediatric:</b> 110 <b>Neonate:</b> 80	-28-300
		Lower Limit	<b>Adult:</b> 50 <b>Pediatric:</b> 50 <b>Neonate:</b> 35	-30-298
		Source Label	P2	P2, ABP, AO, ART, BAP, CVP, FAP, ICP, LAP, PAP, RAP, UAP, UVP
		Display Format	S/D (M)	S/D (M), S/D, (M) S/D, (M)

APPENDIX A Configuration Tables

Menu	Submenu	Parameter Name	Default Value	Parameter Values
IBP3	P3 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 220 <b>Pediatric:</b> 145 <b>Neonate:</b> 100	-28-300
		Lower Limit	<b>Adult:</b> 75 <b>Pediatric:</b> 75 <b>Neonate:</b> 50	-30-298
	P3 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 110 <b>Pediatric:</b> 100 <b>Neonate:</b> 70	-28-300
		Lower Limit	<b>Adult:</b> 35 <b>Pediatric:</b> 35 <b>Neonate:</b> 30	-30-298

Menu	Submenu	Parameter Name	Default Value	Parameter Values
	P3 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	<b>Adult:</b> 120 <b>Pediatric:</b> 110 <b>Neonate:</b> 80	-28-300
		Lower Limit	<b>Adult:</b> 50 <b>Pediatric:</b> 50 <b>Neonate:</b> 35	-30-298
		Source Label	P3	P3, ABP, AO, ART, BAP, CVP, FAP, ICP, LAP, PAP, RAP, UAP, UVP
		Display Format	S/D (M)	S/D (M), S/D, (M) S/D, (M)

## Supervisor Menu

The following table includes parameter ranges and default values for the Supervisor menu:

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
Alarms	General	Default Patient Mode	Adult	Adult, Pediatric, Neonate
		Volume	Medium	Low, Medium, High
		Audio Paused Time (Alarm Suspend Time)	4 min	Disable, 2 min, 4 min, 15 min, Always On
		Alarm Latching Enable	No	Yes, No
		Reminder Alarm	Disable	Enable, Disable
		Reminder Alarm Interval	5 min	5 min, 10 min, 15 min
	Default Adult>LTA Monitoring	LTA Monitoring	Off	On, Off

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>HR/PR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	120	32-300
		Lower Limit	50	30-298
	Default Adult>cl Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	220	32-260
		Lower Limit	75	30-258
	Default Adult>NIBP Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	22-220
		Lower Limit	35	20-218
	Default Adult>NIBP MAP Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	120	25-230
		Lower Limit	50	23-228

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>EtCO2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	60	5-150
		Lower Limit	8	0-145
	Default Adult>FiCO2 Alarm	Upper Limit Enable	Off	On, Off
		Upper Limit	8	2-98
	Default Adult>RR/BR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	50	5-150
		Lower Limit	3	0-145

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>No Breath Alarm	No Breath Alarm	Off	Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec



		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>SpO2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	52-100
		Lower Limit	85	50-98
	Default Adult>SpCO Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	10	2-100
		Lower Limit	0	0-98
	Default Adult>SpMet Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	3.0	2.0-100.0
		Lower Limit	0.0	0.0-98.0
	Default Adult>SpHb Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	17.0 gdl 11.0 mmol/L	gdL: 2 to 25 mmol/L: 2 to 15.5
		Lower Limit	7.0 gdl 4.0 mmol/L	gdL: 0 to 24.9 mmol/L: 0 to 15.4
Lower Limit Enable		Off	On, Off	

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>SpOC Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	25 ml/dL	0.1 to 35 ml/dL
		Lower Limit	10 ml/dL	0 to 34.9 ml/dL
	Default Adult>PVI Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	40%	2 to 100%
		Lower Limit	5%	0 to 98%
	Default Adult>PI Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	20%	0.2 to 20%
		Lower Limit	0%	0 to 19.8%
	Default Adult>T2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 100.0 °C: 37.8	°F: 34.0-122.0 °C: 2.0-50.0
		Lower Limit	°F: 95.0 °C: 35.0	°F: 32.0-120.0 °C: 0.0-48.0

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>DT Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 5.0 °C: 2.8	°F: 0.2-90.0 °C: 0.2-50.0
		Lower Limit	°F: 0.0 °C: 0.0	°F: 0.0-89.8 °C: 0.0-49.8
	Default Adult>P1 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	220	-28-300
		Lower Limit	75	-30-298
	Default Adult>P1 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	-28-300
		Lower Limit	35	-30-298

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>P1 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	120	-28-300
		Lower Limit	50	-30-298
	Default Adult>P2 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	220	-28-300
		Lower Limit	75	-30-298
	Default Adult>P2 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	-28-300
		Lower Limit	35	-30-298
	Default Adult>P2 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	120	-28-300
		Lower Limit	50	-30-298

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Adult>P3 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	220	-28-300
		Lower Limit	75	-30-298
	Default Adult>P3 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	-28-300
		Lower Limit	35	-30-298
	Default Adult>P3 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	120	-28-300
		Lower Limit	50	-30-298
	Default Pediatric>LTA Monitoring	LTA Monitoring	Off	On, Off
	Default Pediatric> HR/PR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	150	32-300
Lower Limit		50	30-298	

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Pediatric>NIBP Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	145	32-160
	Default Pediatric>NIBP Systolic Alarms	Lower Limit	75	30-158
	Default Pediatric>NIBP Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	22-130
		Lower Limit	35	20-128
	Default Pediatric>NIBP MAP Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	25-140
		Lower Limit	50	23-138
	Default Pediatric>EtCO2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	60	5-150
Lower Limit		8	0-145	
Default Pediatric>FiCO2 Alarm	Upper Limit Enable	Off	On, Off	
	Upper Limit	8	2-98	

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Pediatric>RR/BR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	50	5-150
		Lower Limit	3	0-145
	Default Pediatric>No Breath Alarm	No Breath Alarm	Off	Off, 10 sec, 15 sec, 20 sec, 25 sec, 30 sec, 40 sec, 50 sec, 60 sec
	Default Pediatric>SpO2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	52-100
		Lower Limit	85	50-98
	Default Pediatric>SpCO Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	10	2-100
		Lower Limit	0	0-98
	Default Pediatric>SpMet Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	3	2.0-100.0
Lower Limit		0	0.0-98.0	

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Pediatric>T2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 100.0 °C: 37.8	°F: 34.0-122.0 °C: 2.0-50.0
		Lower Limit	°F: 95.0 °C: 35.0	°F: 32.0-120.0 °C: 0.0-48.0
	Default Pediatric>DT Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 5.0 °C: 2.8	°F: 0.2-90.0 °C: 0.2-50.0
		Lower Limit	°F: 0.0 °C: 0.0	°F: 0.0-89.8 °C: 0.0-49.8



		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Pediatric>P1 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	145	-28-300
		Lower Limit	75	-30-298
	Default Pediatric>P1 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	-28-300
		Lower Limit	35	-30-298
	Default Pediatric>P1 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	-28-300
		Lower Limit	50	-30-298
	Default Pediatric>P2 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	145	-28-300
		Lower Limit	75	-30-298

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Pediatric>P2 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	-28-300
		Lower Limit	35	-30-298
	Default Pediatric>P2 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	-28-300
		Lower Limit	50	-30-298
	Default Pediatric>P3 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	145	-28-300
		Lower Limit	75	-30-298
	Default Pediatric>P3 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	-28-300
		Lower Limit	35	-30-298

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Pediatric>P3 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	110	-28-300
		Lower Limit	50	-30-298
	Default Neonate>HR/PR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	200	32-300
		Lower Limit	100	30-298
	Default Neonate>NIBP Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	22-120
		Lower Limit	50	20-118
	Default Neonate>NIBP Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	70	12-110
		Lower Limit	30	10-108

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Neonate>NIBP MAP Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	80	15-110
		Lower Limit	35	13-108
	Default Neonate>EtCO2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	60	5-150
		Lower Limit	8	0-145
	Default Neonate>FiCO2 Alarm	Upper Limit Enable	Off	On, Off
		Upper Limit	8	2-98

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Neonate>RR/BR Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	80	5-150
		Lower Limit	12	0-145
	Default Neonate>No Breath Alarm	No Breath Alarm	Off	Off, 10 sec, 15 sec, 20 sec
	Default Neonate>SpO2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	95	52-100
		Lower Limit	85	50-98
	Default Neonate>SpCO Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	10	2-100
		Lower Limit	0	0-98
	Default Neonate>SpMet Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	3	2.0-100.0
Lower Limit		0	0.0-98.0	

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Neonate>SpHb Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	17.0 gdL 11.0 mmol/L	gdL: 2 to 25 mmol/L: 2 to 15.5
		Lower Limit	7.0 gdL 4.0 mmol/L	gdL: 0 to 24.9 mmol/L: 0 to 15.4
	Default Neonate>SpOC Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	25 ml/dL	0.1 to 35 ml/dL
		Lower Limit	10 ml/dL	0 to 34.9 ml/dL
	Default Neonate>PVI Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	40%	2 to 100%
		Lower Limit	5%	0 to 98%
	Default Neonate>PI Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	20%	0.2 to 20%
		Lower Limit	0%	0 to 19.8%
Default Neonate>T1 Alarm	Upper Limit Enable	Off	On, Off	
	Lower Limit	Off	On, Off	

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Enable		
		Upper Limit	°F: 100.0 °C: 37.8	°F: 34.0-122.0 °C: 2.0-50.0
		Lower Limit	°F: 95.0 °C: 35.0	°F: 32.0-120.0 °C: 0.0-48.0
	Default Neonate>T2 Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 100.0 °C: 37.8	°F: 34.0-122.0 °C: 2.0-50.0
		Lower Limit	°F: 95.0 °C: 35.0	°F: 32.0-120.0 °C: 0.0-48.0
	Default Neonate>DT Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	°F: 5.0 °C: 2.8	°F: 0.2-90.0 °C: 0.2-50.0
		Lower Limit	°F: 0.0 °C: 0.0	°F: 0.0-89.8 °C: 0.0-49.8
	Default Neonate>P1 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	-28-300
		Lower Limit	50	-30-298

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Neonate>P1 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	-28-300
		Lower Limit	50	-30-298
	Default Neonate>P1 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	80	-28-300
		Lower Limit	35	-30-298
	Default Neonate>P2 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	-28-300
		Lower Limit	50	-30-298
	Default Neonate>P2 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	70	-28-300
		Lower Limit	30	-30-298



		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Default Neonate>P2 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	80	-28-300
		Lower Limit	35	-30-298
	Default Neonate>P3 Systolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	100	-28-300
		Lower Limit	50	-30-298
	Default Neonate>P3 Diastolic Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	70	-28-300
		Lower Limit	30	-30-298
	Default Neonate>P3 Mean Alarm	Upper Limit Enable	Off	On, Off
		Lower Limit Enable	Off	On, Off
		Upper Limit	80	-28-300
		Lower Limit	35	-30-298
Log	Treatment Options	Configuration Method	Select From Predefined List	Select From Pre-defined List, Define Custom Labels

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Treatment Button #1	O2	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
		Treatment Button #2	ASA	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
		Treatment Button #3	Nitro	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
		Treatment Button #4	Morph	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
		Treatment Button #5	IV	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate
		Treatment Button #6	B Block	O2, ASA, Nitro, Morph, IV, B Block, Lido, MgSO4, Valium, Sedate

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
Defib/Pacer	Default Settings	Adult Defib Ext. Pdl. Energy	120 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Pediatric Defib Ext. Pdl. Energy	50 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
		Neonate Defib Ext. Pdl. Energy	50 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
		Adult Defib Int. Pdl. Energy	10 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J
		Pediatric Defib Int. Pdl. Energy	10 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J
		Neonate Defib Int. Pdl. Energy	10 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J
		Sync After Cardioversion	Off	On, Off
		Default Pacer Mode	Demand	Demand, Fixed
		Default Pacer Rate	70	30-180 (<100 by increments of 5, >100 by increments of 10)
		Auto Display Pads/Paddles	No	Yes, No

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		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Energy Escalation	Basic Auto Energy Selection	Disabled	Disabled, Enabled

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Adult Shock 1 Energy	120 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
		Adult Shock 2 Energy	150 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
		Adult Shock 3 Energy	200 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
		Pediatric Shock 1 Energy	50 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
		Pediatric Shock 2 Energy	70 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J
		Pediatric Shock 3 Energy	85 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J, 85 J, 100 J, 120 J, 150 J, 200 J

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
ECG	General	AC Mains Filter	60 Hz	Off, 50 Hz, 60 Hz
		Auto Add Filter ECG	No	Yes, No
	12 Lead ECG	Print on 12-Lead Acquire	Off	On, Off
		Print Copies	1	1, 2, 3, 4, 5
		12-Lead Format	3x4	2x6, 3x4, 3x4 Cabrera, 3x4 Hybrid, 3x4 Cabrera Hybrid
		Print 10s Trace 1	I	Off, I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
		Print 10s Trace 2	Off	Off, I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
		Print 10s Trace 3	Off	Off, I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6
		12-Ld Frequency Response	Filtered Diagnostic	Diagnostic, Filtered Diagnostic
		12-Ld Analysis Enabled	On	On, Off
		Interpretive Text	On	On, Off
		Patient Information Prompt	On	On, Off
		Print 12-Ld 1mV Bracket	No	Yes, No

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
NIBP		Default NIBP Mode	Manual	Manual, Auto
		Default Auto Mode Interval	5 min	1 min, 2 min, 3 min, 5 min, 10 min, 15 min, 30 min, 60 min
		Default Cuff Inflation Target (Adult)	160	120-260 (by increments of 20)
		Default Cuff Inflation Target (Ped.)	120	80-150 (by increments of 10)
		Default Cuff Inflation Target (Neo.)	90	60-130 (by increments of 10)
Printer		Print on Defib/Pacer Events	On	On, Off



		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Print on Event	Off	On, Off
		Print on Treatment Snapshot	Off	On, Off
		Print Treatment Summary Snapshots	On	On, Off
		Print on Analysis Results	Off	On, Off
		Print on Presenting Rhythm	Off	On, Off
		Print on Readiness Test Results	Off	On, Off

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
Display/Configuration	Localization	Language	English	Arabic (Voice only), Brazilian Portuguese, Simplified Chinese, Traditional Chinese, Czech, Danish, Dutch, English, Finnish, French, French Canadian, German, Italian, Japanese, Korean (Voice only), Norwegian, Polish, Romanian, Russian, Spanish, Swedish, Turkish

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		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Decimal Format	.(dot)	.(dot),, (comma)

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Date Format	MM/DD/YYYY	MM/DD/YYYY, DD/MM/YYYY, YYYY/MM/DD, MM-DD-YYYY, DD-MM-YYYY, YYYY-MM-DD
		Time Format	12 Hour, 24 Hour	24 Hour
		Temp Units	°F	°F, °C
		IBP Units	mmHg	mmHg, kPa
		CO2 Units	mmHg	mmHg, kPa,%
		NIBP Units	mmHg	mmHg, kPa
		ECG Lead Labels	AAMI	AAMI, IEC
		NIBP Display Format	S/D (M)	S/D (M), (M) S/D
		Length Units	Inch	Inch, cm
		AC Mains Filter	60 Hz	Off, 50 Hz, 60 Hz
		SpHb Units	g/dL, mmol/L	g/dL
	Color	ECG Color	Green	Green, Blue, Yellow, Red, White, Magenta, Cyan
		SpO2 Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan
		SpCO Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		SpMet Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan
		SpHb Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan
		SpOC Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan
		PVI Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan
		PI Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan
		NIBP Color	Cyan	Green, Blue, Yellow, Red, White, Magenta, Cyan

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		CO2 Color	Magenta	Green, Blue, Yellow, Red, White, Magenta, Cyan
		Resp Color	Magenta	Green, Blue, Yellow, Red, White, Magenta, Cyan
		Temp Color	White	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source P1 Color	Red	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source P2 Color	Cyan	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source P3 Color	White	Green, Blue, Yellow, Red, White, Magenta, Cyan

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		IBP Source ABP Color	Green	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source ART Color	Red	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source AO Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source CVP Color	Cyan	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source ICP Color	White	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source LAP Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan

APPENDIX A Configuration Tables

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		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		IBP Source PAP Color	Yellow	Green, Blue, Yellow, Red, White, Magenta, Cyan



		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		IBP Source RAP Color	Blue	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source UAP Color	Red	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source UVP Color	Blue	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source BAP Color	Red	Green, Blue, Yellow, Red, White, Magenta, Cyan
		IBP Source FAP Color	Green	Green, Blue, Yellow, Red, White, Magenta, Cyan
	Clock	Daylight Saving Mode	Manual, Auto	Manual
		Configure		
		Current Time	DST, Standard	Standard
	Device Info	<blank>	Alphanumeric	
	Unit ID			
		Department Name	<blank>	Alphanumeric
		Contact Telephone	<blank>	Alphanumeric
	Display Setup	Display FiCO2	No	No, Yes

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		Screen Cycle Display Formats	All Available	All Available, Skip Large Numerics
		Top Trace Default ECG Lead	Pads	Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
		Auto ECG Lead	II	Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
		Default ECG Lead	Pads	Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
		Default ECG Leads	Not Assigned	Not Assigned, Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
			Not Assigned	Not Assigned, Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
			Not Assigned	Not Assigned, Pads, I, II, III, aVR, aVL, aVF, V, V1, V2, V3, V4, V5, V6
		Enable NVG Mode	No	No, Yes

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Supervisor Code		Contact the Zoll Technical Support Department if you do not have the default supervisor code	Numeric
	Log Clear Code	Log Clear Restriction	Passcode	User confirmation, Passcode
		Log Clear Code	1234	Numeric

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
AED	General	Power Up Mode	Manual	Manual, AED
		Restart Analysis After CPR	No	Yes, No
		Manual Mode Analysis	Single Analysis	Single Analysis, Analysis/ CPR Protocol
		Enable Voice Prompts	Always	Always, AED Mode Only
		Disarm Timeout	30 sec	30 sec, 60 sec
		CPR Time	2 min	1 min, 1.5 min, 2 min, 2.5 min, 3 min, 3.5 min, 4 min
		CPR Message After "No Shock Advised"	Perform CPR	Perform CPR, If No Pulse, Perform CPR
		CPR Message After Shock Delivered	Perform CPR	Perform CPR, If No Pulse, Perform CPR
		Enable SCE	No	Yes, No
		SCE Alter Adv Decision	1	Off, 1, 2, 3, 4
		CPR Analysis	Disabled	AED Mode Only, AED and CPR Protocol, Disabled

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Energy Protocol	Adult Shock 1 Energy	120 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120 J, 150 J, 200 J
		Adult Shock 2 Energy	150 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120 J, 150 J, 200 J
		Adult Shock 3 Energy	200 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120 J, 150 J, 200 J
		Pediatric Shock 1 Energy	50 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120 J, 150 J, 200 J
		Pediatric Shock 2 Energy	70 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120 J, 150 J, 200 J
		Pediatric Shock 3 Energy	85 J	1 J, 2 J, 3 J, 4 J, 5 J, 6 J, 7 J, 8 J, 9 J, 10 J, 15 J, 20 J, 30 J, 50 J, 70 J 85 J, 100 J, 120 J, 150 J, 200 J

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	AED Mode	Begin with CPR	No	No, Yes
		Manual Mode Restriction	User Conformation	User Conformation, Passcode
		Manual Mode Passcode	<blank>	Numeric
		NIBP Monitoring	Disable	Disable, Enable
		CO2 Monitoring	Disable	Disable, Enable
		SpO2 Monitoring	Disable	Disable, Enable
		Temperature Monitoring	Disable	Disable, Enable
		12-Lead Monitoring	Disable	Disable, Enable
		Allow User to End CPR to Analyze	Yes	No, Yes

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
CPR		AHA/ERC Guidelines	2010	2005, 2010, 2015
		CPR Time	2 min	1 min, 1.5 min, 2 min, 2.5 min, 3 min, 3.5 min, 4 min
		Enable Metronome	Always	Never, Always, AED Mode Only
		Constant Metronome	Disabled	Enabled, Disabled
		Enable CPR Prompts	Text and Voice	Text and Voice, Text Only
		Display "Fully Release" Prompt	Yes	No, Yes
		Log CPR Metrics	Yes	No, Yes
		Auto Display Compression Time	No	No, Yes
		Display Feedback Indicators	Yes	No, Yes
		ResQCPR	Disable	Disable, Enable

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
Communications		Wireless	Enabled	Disabled, Enabled
		Bluetooth	Disabled	Disabled, Enabled
		Wi-Fi	Disabled	Disabled, Enabled
		Power Management	Enabled	Disabled, Enabled
		Power Management	Disabled	Disabled, Enabled
		Cellular	Configure	
		Ethernet	Enabled	Disabled, Enabled
		12-Lead Reports	Configure	
		Disclosure Log	Configure	
		Data Services	Configure	
		Clock Sync	Configure	
		Mobile Streaming	Disabled	Disabled, Enabled
Clinical Dashboards		TBI	Enable	Enable/Disable
	Configure	Target Breath Rate	10 BPM	8 BPM, 9 BPM, 10 BPM, 11 BPM, 12 BPM, 14 BPM, 16 BPM, 20 BPM, 25 BPM, OFF
		SBP Lower Limit	90 mmHg	80 to 130 mmHg
		EtCO2 Upper Limit	45 mmHg	35 to 50 mmHg
		EtCO2 Lower Limit	35 mmHg	25 to 40 mmHg



		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
		SpO2 Lower Limit	90%	80 to 100%
Service	Device Tests	Keypad Test		
		LED Test		
		RFU Indicator Test		
		Audio Test		
		Printer Test		
		Battery Test		
		Fan Test		
		NIBP Test		
		USB Test		
	Device Configuration	N/A		
	Update/Upgrade	Field Upgrades		
		Software Updates		
	Diagnostic-ECG	General>Resp Breath Marker	Off	On, Off
		Error Counts>ECG CRC Count		
Diagnostic-NIBP	General			
	Calibration Info			
	Reading Counts			
	Cycle/Error Counts			
	NIBP Test			

APPENDIX A Configuration Tables

		<b>Parameter Name</b>	<b>Default Value</b>	<b>Parameter Values</b>
	Diagnostic-CO2			
	Diagnostic-SpO2	Version Info		
		Error Counts		
	Diagnostic-Temp/IBP	Error Counts		
	Diagnostic-Defib/Pacer	Version Info		
		Cycle Counts		
		Error Counts		
Diagnostic-Communications	Operational Log Transfer to USB			
	Device Monitoring			
	Research Options	Waveform Recording Sample Rate	250 Hz	250 Hz, 500 Hz
	Supervisor Code	Supervisor Code	<blank>	Numeric
	Import Configuration			
	Export Configuration			