Alarms

High Priority Alarm
If the pump is running, it always stops when a high priority alarm is activated. Accompanied by a red screen, it continues until acknowledged or until the condition that triggered the alarm goes away.

Medium Priority Alarm
This alarm does not stop the pump. Accompanied by an amber screen, it continues until acknowledged or until the condition that triggered the alarm goes away.

Low Priority Alarm
A low priority alarm does not stop the pump. Accompanied by a blue screen, the alarm automatically clears after 5 seconds or until the condition that triggered the alarm goes away.

Informational Message
This alarm does not stop the pump. This message appears in the status bar. It is displayed for 5 seconds and is generally silent, requiring no acknowledgement.

Troubleshooting

Screen is blank and alarm is sounding

Alarm Priority High. The pump has lost power and is no longer delivering. The pump was delivering and the batteries were removed or the battery door was opened. Clear this alarm by replacing the batteries or closing the battery door. Then turn the pump back on or the alarm stops after the power has been off for a minimum of 2 minutes.

Air-in-line detected. Press “acknowledge” then prime tubing

Alarm Priority High. The pump is stopped and can not run. The air detector has detected air in the fluid path; the fluid path may contain air bubbles. Acknowledge the alarm. Then, if the fluid path contains air bubbles, close the clamps, disconnect the fluid path from the patient, and follow the instructions for priming to remove the air.

Battery depleted. Pump stopped

Alarm Priority High. Install 4 new AA batteries or a fully rechargeable battery pack. In order to start delivery, good batteries must always be installed, even when an external source of power is connected. If appropriate, restart the pump.

Battery low. Replace battery.

Alarm Priority Low. Change the rechargeable battery pack or the 4 AA batteries soon.

Current settings require high/standard volume set. Change cassette

Alarm Priority High. A high volume or standard volume administration set is required. The pump is stopped and will not run. Remove the administration set to continue.

Delivery limit reached. Or, delivery limit reached and partial dose delivered Pump’s status bar reads “KVO = 0”

Alarm Priority Low. The programmed delivery limit has been reached, and the pump is not delivering fluid. This alarm occurs when the continuous rate or a PCA dose has caused the delivery limit to be exceeded. Acknowledge the alarm (the alarm automatically clears after 5 seconds).

Pump’s status bar reads “Del Limit”

Alarm Priority Low. The programmed delivery limit has been reached, and the pump is not delivering fluid with the KVO rate of 0.1mL/hr. This alarm occurs when the continuous rate or a PCA dose has caused the delivery limit to be exceeded. Acknowledge the alarm (the alarm automatically clears after 5 seconds).

Troubleshooting continued

Downstream occlusion. Clear occlusion between pump and patient

Alarm Priority High. The pump has detected high pressure, which may be resulting from a downstream blockage, kink in the fluid path, or a closed tubing clamp. Delivery pauses and resumes if the occlusion is removed. Remove the obstruction or stop the pump to silence the alarm for 2 minutes, then remove the obstruction and restart the pump.

Reservoir volume low

Alarm Priority High. (depending on how the alarm is programmed in Admin Settings) Level of fluid in the reservoir is low. Prepare to install a new reservoir, if appropriate.

Reservoir volume is zero. Pump stopped

Alarm Priority High. The reservoir volume has reached 0.0 mL. The pump stops and can not run. Acknowledge the alarm. Install a new fluid container. Reset or edit the value of the reservoir volume.

Upstream occlusion. Clear occlusion between pump and reservoir

Alarm Priority Low. Fluid is not flowing from the fluid container to the pump, which may be resulting from a kink, a closed clamp, or air bubble in the tubing between the fluid container and pump. Delivery is paused and will not resume if the occlusion is removed. Remove the obstruction to resume operation. The alarm clears when the occlusion is removed. You will be required to acknowledge this alarm after it clears if it has occurred and cleared more than 3 times within 15 minutes.

Upstream occlusion. Clear occlusion between pump and reservoir

Alarm Priority Low. Fluid is not flowing from the fluid container to the pump, which may be resulting from a kink, a closed clamp, or air bubble in the tubing between the fluid container and pump. Delivery is paused and will not resume if the occlusion is removed. Remove the obstruction to resume operation. The alarm clears when the occlusion is removed. You will be required to acknowledge this alarm after it clears if it has occurred and cleared more than 3 times within 15 minutes.

Occlusion alarm for 2 minutes, then remove the obstruction or stop the pump to silence the alarm.

Delivery pauses and resumes if the occlusion is removed.

Remove the obstruction or stop the pump to silence the alarm for 2 minutes, then remove the obstruction and restart the pump.

Delivery pauses and resumes if the occlusion is removed.

Remove the obstruction or stop the pump to silence the alarm for 2 minutes, then remove the obstruction and restart the pump.

Delivery pauses and resumes if the occlusion is removed.

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Delivery pauses and resumes if the occlusion is removed.

Remove the obstruction or stop the pump to silence the alarm for 2 minutes, then remove the obstruction and restart the pump.
Changing a patient’s current program while the pump is running

With the pump running, all parameters can be changed except reservoir volume.

Program the pump

Scroll A or B to highlight the patient specific parameter you want to change. Press Select.

1. Unlock the keypad using the security code or the pump key.

2. The patient specific parameter is displayed. Scroll A or B to the new value then press Save.

3. Confirm. Verify the soft limit override by pressing Yes.

4. Repeat steps 1 and 3 for each patient specific parameter that you want to change.

Note: If a security code was used to unlock the keypad, always relock the keypad after making a change by pressing the right soft key twice (Tasks, then Lock Keypad). If a key was used, turn the key clockwise to relock the cassette and keypad.

5. Verify that the keypad and cassette are locked.

Program the Clinician bolus

Pump must be running.

1. From the home screen press Tasks.

2. “Give Clinician Bolus” displays. Press Select.

3. Enter the clinician security code.

4. The screen displays the clinician bolus scroll range available. Scroll A or B until the desired value appears. Press Deliver.

Note: If the desired value is outside the soft limit, press Confirm. Verify the soft limit override by pressing Yes.

5. Choose Stop Bolus anytime during delivery to cancel the bolus.

Stop the pump

1. Press Stop/Start.


Program the pump

1. Scroll A or B to highlight the patient specific parameter you want to change. Press Select.

2. Unlock the keypad using the security code or the pump key.

3. The patient specific parameter is displayed. Scroll A or B to the new value then press Save.

4. Unlock the keypad using the security code or the pump key.

5. The patient specific parameter is displayed. Scroll A or B to the new value then press Save.

6. If the desired value is outside the soft limit, press Confirm. Verify the soft limit override by pressing Yes.

Note: The next bolus setting allows for a one time override of the intermittent bolus cycle as defined by the bolus interval.

7. Choose Accept Value to confirm the value is correct or scroll to edit the highlighted parameter.

8. Confirm until all patient specific parameters have been reviewed, accepted and display checkmarks.

9. Continue until all patient specific parameters have been reviewed, accepted and display checkmarks.


12. “Select Therapy” menu is displayed.


16. “Yes” appears on the screen. Press any button on the keypad to turn the pump on.

Changing a patient’s current program while the pump is running

With the pump running, all parameters can be changed except reservoir volume.

Program the pump

Scroll A or B to highlight the patient specific parameter you want to change. Press Select.

1. Unlock the keypad using the security code or the pump key.

2. The patient specific parameter is displayed. Scroll A or B to the new value then press Save.

3. Confirm. Verify the soft limit override by pressing Yes.

4. Repeat steps 1 and 3 for each patient specific parameter that you want to change.

Note: If a security code was used to unlock the keypad, always relock the keypad after making a change by pressing the right soft key twice (Tasks, then Lock Keypad). If a key was used, turn the key clockwise to relock the cassette and keypad.

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Note: If the desired value is outside the soft limit, press Confirm. Verify the soft limit override by pressing Yes.

5. Choose Stop Bolus anytime during delivery to cancel the bolus.

Stop the pump

1. Press Stop/Start.

2. “Stop Pump?” displays. Press Yes. Aseptically remove the empty IV bag or syringe from the tubing and attach the new IV bag or syringe.

Reset reservoir volume

1. Scroll A or B until Reservoir Vol is highlighted.

2. Screen displays “Reservoir Volume remaining: XXmL, Reset?” Press Yes.

3. Unlock the keypad using the security code or the pump key.

4. The screen displays the current reservoir volume and a scroll range.

5. Press Select to reset the reservoir volume or Scroll A or B to adjust the value. Press Save.

When programming is complete

1. Press Stop/Start.

2. Screen displays “Reservoir Volume remaining: XXmL, Reset?” Press Yes.

3. Choose Accept Value to confirm the value is correct for the highlighted patient specific parameter or press Select to edit the highlighted parameter.

4. Continue until all patient specific parameters have been reviewed, accepted and display checkmarks. Press Next.


6. If a security code was used to unlock the keypad, always relock the keypad after making a change by pressing the right soft key twice (Tasks, then Lock Keypad). If a key was used, turn the key clockwise to relock the cassette/keypad.

7. Verify that the keypad and cassette are locked.

Changing the batteries

Stop the pump

1. Press Stop/Start.


3. Remove the used batteries.

4. Insert the new battery.

5. Press the power switch to turn on the pump.

6. The screen displays “Do you want to start a new patient?” Press Yes.

7. Press Stop/Start to start the pump.


Changing the IV bag or syringe without changing the tubing

Stop the pump

1. Press Stop/Start.

2. “Stop Pump?” displays. Press Yes. Aseptically remove the empty IV bag or syringe from the tubing and attach the new IV bag or syringe.

Reset reservoir volume

1. Scroll A or B until Reservoir Vol is highlighted.

2. Screen displays “Reservoir Volume remaining: XXmL, Reset?” Press Yes.

3. Unlock the keypad using the security code or the pump key.

4. The screen displays the current reservoir volume and a scroll range.

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7. Verify that the keypad and cassette are locked.

Changing the IV bag or syringe without changing the tubing

Stop the pump

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7. Verify that the keypad and cassette are locked.

Changing the batteries

Stop the pump

1. Press Stop/Start.


3. Remove the used batteries.

4. Insert the new battery.

5. Press the power switch to turn on the pump.

6. The screen displays “Do you want to start a new patient?” Press Yes.

7. Press Stop/Start to start the pump.


Changing the IV bag or syringe without changing the tubing

Stop the pump

1. Press Stop/Start.

2. “Stop Pump?” displays. Press Yes. Aseptically remove the empty IV bag or syringe from the tubing and attach the new IV bag or syringe.

Reset reservoir volume

1. Scroll A or B until Reservoir Vol is highlighted.

2. Screen displays “Reservoir Volume remaining: XXmL, Reset?” Press Yes.

3. Unlock the keypad using the security code or the pump key.

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