

# smiths medical cadd®



## CADD®-Solis VIP Ambulatory Infusion Pump

Quick Reference Card for Clinicians

- |                               |                                  |
|-------------------------------|----------------------------------|
| <b>A.</b> Battery Compartment | <b>G.</b> Remote Dose Cord Jack  |
| <b>B.</b> Display             | <b>H.</b> Keypad                 |
| <b>C.</b> Indicator Lights    | <b>I.</b> Cassette Latch         |
| <b>D.</b> USB Port            | <b>J.</b> J Cassette/Keypad Lock |
| <b>E.</b> Blue AC Power Light | <b>K.</b> K Power Switch         |
| <b>F.</b> AC Power Jack       |                                  |

## Screensaver

The screensaver allows the pump to conserve battery power when not in an edit mode or if no keypad buttons have been pressed for 30 seconds. The pump displays a blank screen. Press any button on the keypad to turn on the display, except the PCA dose key when in PCA mode.

## Blue Text

Blue text that appears on the screen provides further instructions for that particular screen.

## Insert Batteries

1. Open the battery compartment and insert four AA batteries matching the + and – markings inside the battery compartment, or insert a rechargeable battery pack
2. Close the compartment cover when the batteries are in place

## Power On

1. Press and hold the power switch
2. The pump carries out self-tests and sounds six beeps when the tests are complete
3. Home screen is displayed

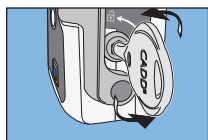
## Unlocking the Pump

### *With the code*

1. Press ▲ or ▼ until the first digit of the code is shown
2. Press Select to advance to the next digit
3. Repeat with the second and third digits then press Select or Accept Value

### *With the key*

1. Insert into the lock and turn counterclockwise

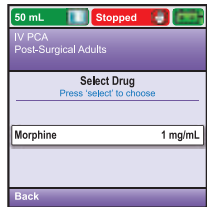
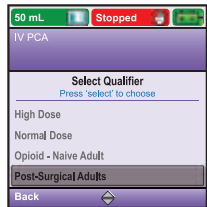
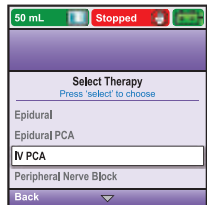


## Setting up the Pump for a New Patient

1. Insert a fresh set of four AA batteries or a rechargeable battery pack
2. Press and hold the power switch to turn the pump on
3. Pump displays the home screen
4. Select Tasks, then View Advanced Tasks, then Start New Patient
5. The next screen informs you that completing this task will overwrite all delivery settings

**Note:** To edit individual settings rather than starting a new patient or protocol, see Editing Individual Delivery Settings.

6. Press continue to unlock the keypad using the security code or the pump key
7. Select the therapy - press ▲ or ▼ to highlight the desired therapy and press Select
8. Select the qualifier - press ▲ or ▼ to highlight the desired qualifier and press Select
9. Select the drug - press ▲ or ▼ to highlight the desired drug and press Select
10. Confirm and review the settings – press Yes if the information is correct and Review to continue
11. Carefully check the patient specific parameters. Press Accept Value on each parameter, or press Select to change
12. When you have finished the review, press Next to continue



## Editing Individual Delivery Settings

The delivery settings are patient-specific parameters of a therapy that are directly related to the drug being infused and can be edited within limits established in the protocol.

To view and edit delivery settings:

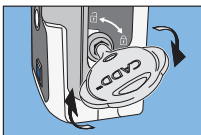
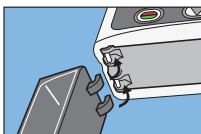
1. Stop the pump if it is running
2. In the Tasks menu, press ▲ or ▼ until View Delivery Settings is highlighted, then press Select
3. Press ▲ or ▼ until the desired setting is highlighted, then press Select
4. If requested, unlock the keypad
5. Press ▲ or ▼ until the desired value appears on the screen, then select Save

Change any additional settings by scrolling through the remaining delivery settings and press Select to edit each setting as necessary.

**Note:** Editing individual delivery settings in Step or Taper mode will reset the infusion back to the beginning.

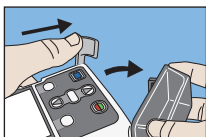
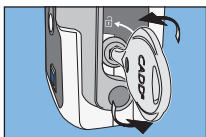
## Attaching a Cassette

1. Clamp the tubing and open the cassette latch
2. Insert the cassette hooks into the hinge pins on the bottom of the pump. Swing the cassette to the latch position
3. Place the pump upright on a firm, flat surface, and press down on the latch side of the pump so the cassette fits tightly against the pump
4. Lift the cassette latch into the closed position. If you experience resistance when lifting the cassette latch handle, do not force the latch. If the pump doesn't latch easily, unlatch the cassette and repeat the process
5. Verify the cassette is attached properly. Looking from left to right, the top of the cassette should line up evenly with the bottom of the pump and be securely attached. If an uneven gap exists, unlatch the cassette and repeat the process
6. To lock the cassette, insert the pump key into the lock and turn it clockwise into the locked position



## Removing a Cassette

1. Make sure the pump is stopped and clamp the tubing
2. If the cassette is locked, insert the pump key and turn the lock counterclockwise into the unlocked position
3. Push down on the cassette latch until the cassette detaches



## Resetting the Reservoir Volume

### *After attaching a new cassette*

1. The screen displays Reset reservoir volume to XX mL? Select Yes to reset the volume or No to keep the volume at the current setting

### *Without changing the cassette*

1. Stop the pump if it is running
2. In the Tasks menu, press ▲ or ▼ to highlight Reset Reservoir Volume and press Select
3. The screen displays Reset reservoir volume to XX mL? Select Yes to reset the volume

## Priming the Tubing

Ensure that the pump is stopped, the tubing is disconnected from the patient, and the tubing clamps are open.

### *After changing a cassette*

1. If a cassette is attached after the pump is powered on, a Prime Tubing? screen will appear. Select Yes (unlock the keypad if required)
2. Select Prime
3. Select Stop Priming when the air is removed or the delivery will stop at 10mL (or 20mL if a high volume set is attached)

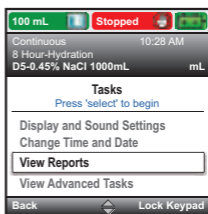
### *No cassette is changed*

1. In the Tasks menu, press or to highlight Prime Tubing and press Select (unlock the keypad if required)
2. Select Prime
3. Select Stop Priming when the air is removed or the delivery will stop at 10mL (or 20mL if a high volume set is attached)

## Reports

Reports can be viewed at any time, with the pump running or stopped.

1. In the Tasks menu, press ▲ or ▼ to highlight View Reports and press Select
2. Press ▲ or ▼ to highlight the desired report and press Select
3. Press Back to return to the Select Report menu and then Back again to return to the Tasks Menu



## Patient Permissions

Stop the pump if it is running. In the Advanced Tasks menu, press ▲ or ▼ to highlight Patient Permissions and press Select.

### *Priming security on/off*

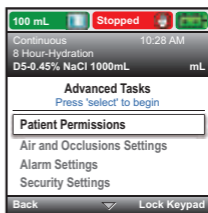
Setting this value to off allows patients to prime the tubing without having to enter a security code.

1. In the Patient Permissions menu, press ▲ or ▼ to highlight Priming Security On/Off and press Select
2. Unlock the keypad
3. Press ▲ or ▼ to set the security to on (security code required) or off (no security code required) and select Save

### *Delayed start security on/off*

Setting this value to off allows patients to set delayed starts without having to enter a security code.

4. In the Patient Permissions menu, press ▲ or ▼ to highlight Delayed Start Security On/Off and press Select
5. Unlock the keypad
6. Press ▲ or ▼ to highlight on (security code required) or off (no security code required) and select Save



# Alarms

## System Fault Alarm

An unrecoverable error may have occurred, such as a hardware or software fault. The amber indicator light is on along with a two-tone alarm and a red screen. To clear the alarm, remove power from the pump.



## High Priority Alarm

The pump pauses or stops if it is running. The pump screen is red and the alarm continues until a key is pressed or the condition that triggered it goes away.



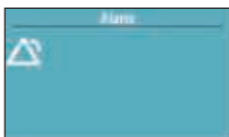
## Medium Priority Alarm

The pump does not stop if it is running. The pump screen is amber and the alarm continues until a key is pressed or the condition that triggered it goes away.



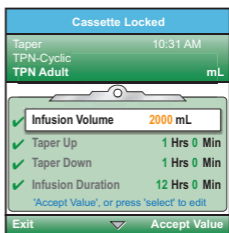
## Low Priority Alarm

The pump does not stop if it is running. The pump screen is blue and the alarm continues for five seconds or until a key is pressed or the condition that triggered it goes away.



## Informational Message

The pump does not stop if it is running. The message appears in the status bar. The alarm continues for five seconds and may be silent, requiring no acknowledgement.



### *Screen is blank and alarm is sounding*

**Alarm Priority High.** The pump was delivering and the batteries were removed or the battery door was opened. The pump has lost power and is no longer delivering. Clear the alarm by turning the pump back on, or the alarm will stop after the power has been off for a minimum of two minutes.

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

**Alarm Priority High.** The air detector has detected air in the fluid path. The pump was delivering and is now stopped and will not run. Select Acknowledge to clear the alarm. If the fluid path contains air bubbles, close the clamps, disconnect the fluid path from the patient, then prime the tubing to remove the air and restart the pump.

### *Battery depleted. Pump stopped.*

**Alarm Priority High.** If the AC adapter is attached, select Acknowledge to clear the alarm. Remove the batteries and install four new AA batteries or a rechargeable battery pack. 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.** Select Acknowledge to clear the alarm, or it will automatically clear after five seconds. Recharge or change the rechargeable battery pack or replace the four AA batteries soon.

### *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 select Stop Pump to silence the alarm for two minutes, then remove the obstruction and restart the pump.

### *Reservoir volume low*

**Alarm Priority Medium or Low.** The priority depends on how the alarm is programmed in Admin Settings. The level of fluid in the reservoir is low. Select Acknowledge to clear the alarm and prepare to install a new reservoir, if appropriate.



## Troubleshooting continued

### *Reservoir volume is zero. Pump stopped.*

**Alarm Priority High.** The reservoir volume has reached 0.0 mL. The pump will stop and not run. Select Acknowledge to clear the alarm. Attach a new reservoir and reset or edit the value of the reservoir volume, if appropriate.

### *Upstream occlusion. Clear occlusion between pump and reservoir.*

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

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