

CAREPATH^{rx}™

Specialty Pharmacy & Infusion Solutions

CADD Solis

2023

CADD Solis Pump

Allow medication to warm to room temperature for 2-4 hours, as noted on the Plan of Treatment.

Rechargeable Battery: Plug in pump for 4 hours each day to fully charge rechargeable battery

- Can use 4 AA batteries if unable to charge pump battery

Always power up before attaching tubing cassette

- Listen for series of beeps and self-check before attaching the tubing cassette
- This will prompt “Reset RES VOL?”

Always prime on its side, with the lever side down to prevent “Air In Line” alarms

Arrives pre-programmed

Programmed to run continuous or intermittent

Commonly used for antibiotics, chemo, hydration, IVIG, narcotics, and specialty infusions



Pump will be delivered programmed with the patient’s orders. Always confirm pump setting against orders prior to starting the pump

- 4 – AA batteries or Rechargeable battery – charge pump 4 hours each day with AC adaptor.



To reduce Air In Line Alarms:

- prime on side with lever side down
- remove blue flow stop device from tubing before spiking the bag.

DELIVERY MODES

- ❖ PCA Delivery Mode
- ❖ Continuous Delivery Mode
- ❖ Intermittent Delivery Mode
- ❖ Step Delivery Mode
- ❖ Taper Delivery Mode



CADD Solis Resources

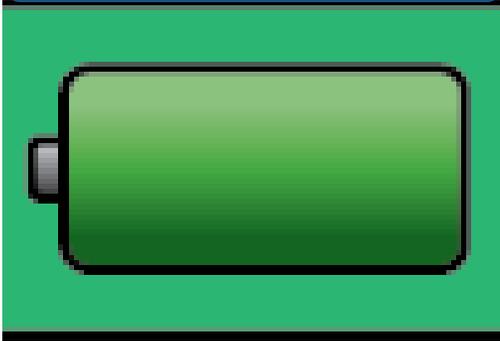
Keypad Code	201 617	Adjust pump parameters (rate or volume of infusion)
Clinician/PCA Code	997	PCA Bolus
Priming Code	201	**Pharmacy to send new pump with priming security turned off **Nurse may call the pharmacy to turn the priming security off **Do NOT give the patient this code, as it will allow them to adjust the pump parameters.

CADD Solis Continuous Infusion Patient Education Video Link: <https://youtu.be/Sza7ucyQfTw?list=TLGGRtQCsMbpQ9wxODAxMjAyMw>

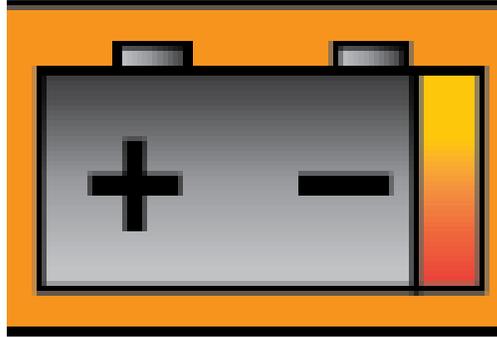
Teaching guide: <https://carepathrxllc.com/wp-content/uploads/2021/06/49.-CADD-Solis-Administration-Procedure-Intermittent-or-Continuous-Mode.pdf>

CADD Solis Battery Use

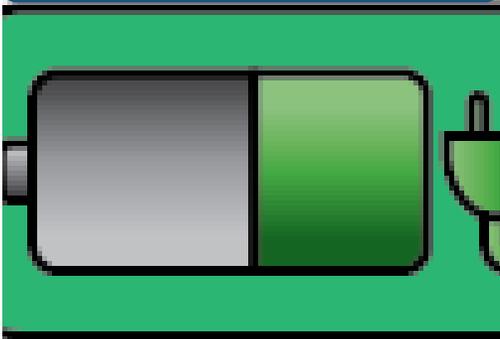
Fully Charged Battery



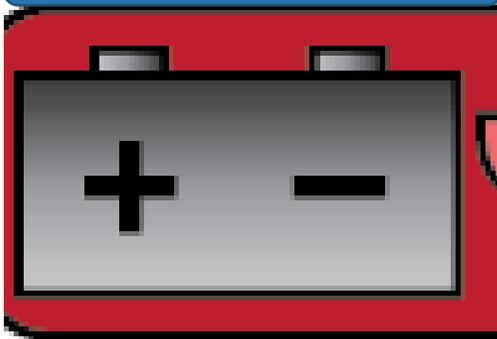
Low Battery



50% Charged Battery



Depleted Battery

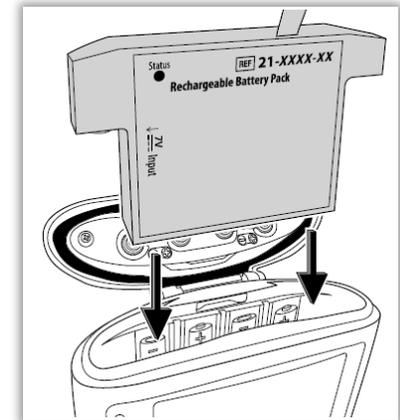


Powered by Battery

- 4 – AA Batteries
- Remove batteries between infusions
- Replace batteries when:
 - Low Battery
 - Depleted battery

• Rechargeable Battery

- Plug in pump for a minimum of 4 hours each day, to maintain battery charge. An AC adapter can be used as a power source or to recharge the rechargeable battery.



CADD Solis Tubing and Cassettes

Low Volume Tubing

0.1-250 ml/hr



High Volume Tubing

Up to 500 ml/hr



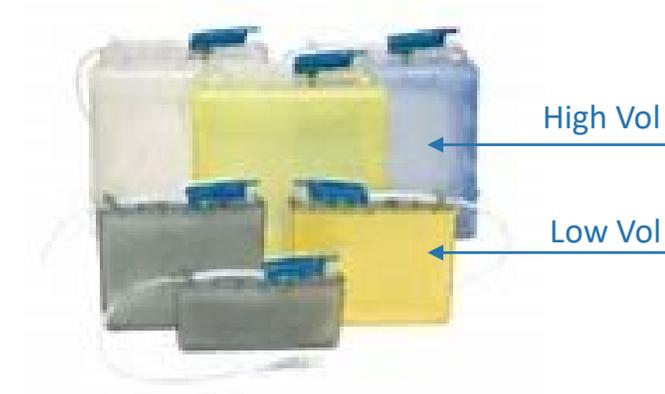
Low Volume Cassette

0.1-250 ml/hr



Variety of Cassettes

Low and High Volume



Tubing changes:

Intermittent Infusions – every 24 hours

Continuous Infusions –based on pharmacy protocols (daily, QOD, every Monday-Wednesday-Friday, or Q96 hours)

PCA - weekly

Attaching the Cassette

Switch the pump on, press and hold the power switch. The pump carries out self-tests and sounds six beeps when the tests are complete. Screen shows “Start New Patient?”

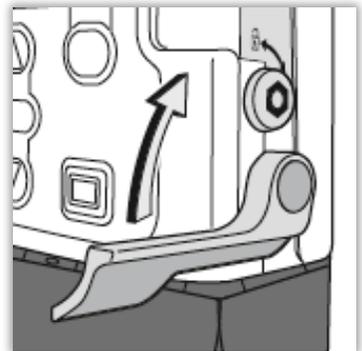
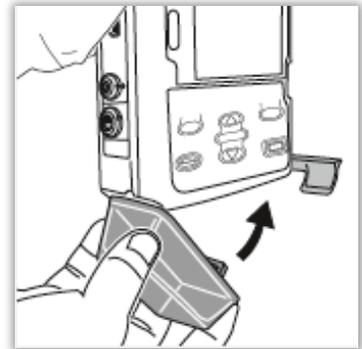
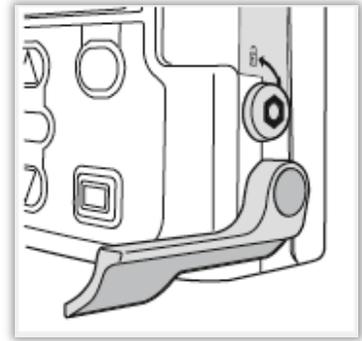
Clamp the tubing, make sure the cassette latch is unlocked and open the cassette latch to 90 degrees.

Insert the cassette hooks into the hinge pins on the bottom of the pump.

Without holding the cassette latch, push up on the cassette until it firmly clicks into place.

Lift the cassette latch up into the closed position.

Insert the pump key and turn it clockwise to lock the cassette.



CADD Solis – Resetting the Reservoir Volume

The reservoir volume setting indicates the amount of fluid contained in the reservoir. Once this number is set, the pump keeps track of how much fluid has been delivered and adjusts the reservoir volume setting accordingly.

Always power up before attaching tubing cassette

Listen for series of beeps and self check before attaching the tubing cassette

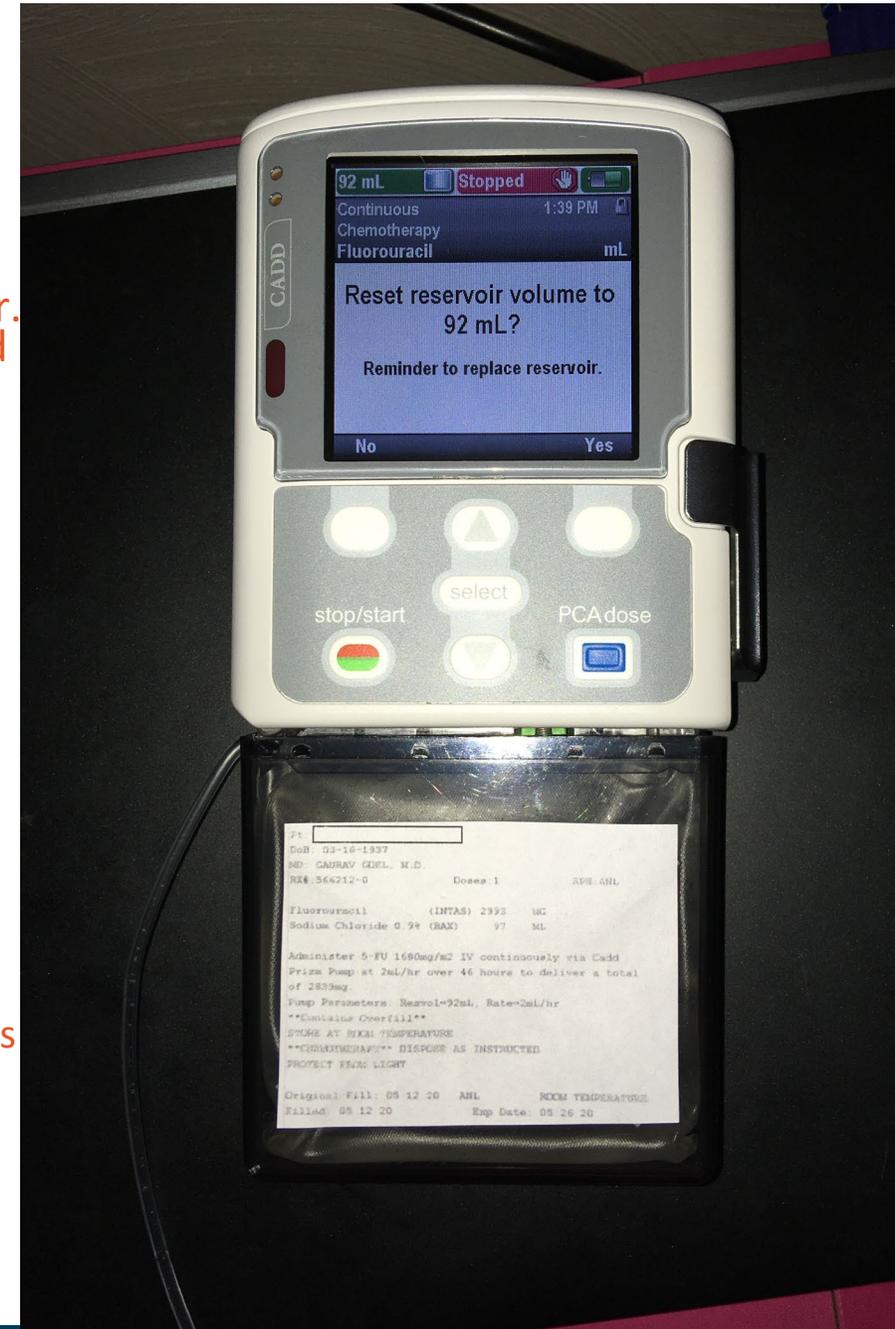
To reset the reservoir volume after attaching a new cassette:

The pump displays a question asking if you wish to reset the volume to the default amount. If this screen does not appear, the reservoir volume may already be reset.

Select Yes to reset the volume and infusion. Select No to keep the reservoir volume at the current setting.

To reset the reservoir volume without changing the cassette:

- Stop the pump if it is running
- In the Tasks menu, press ▲ or ▼ until Reset Reservoir Volume is highlighted, and then press Select
- The pump displays a screen asking you to confirm that you want to reset the reservoir volume. Select Yes.



CADD SOLIS

Resetting Reservoir Volume

Press the soft button
under Task

Press Select with
Reset Reservoir
Volume highlighted

Press the soft
button under Yes

Pump will reset

Continuous



Tasks

Tasks

Press 'select' to begin

Reset Reservoir Volume

Set Delayed Start

Prime Tubing

View Delivery Settings

Back

Reset reservoir volume to
100 mL?

Reminder to replace reservoir.

No

Yes

Reservoir Vol.

100 mL

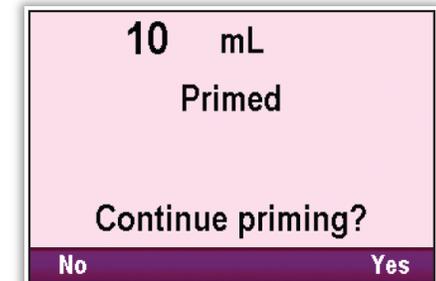
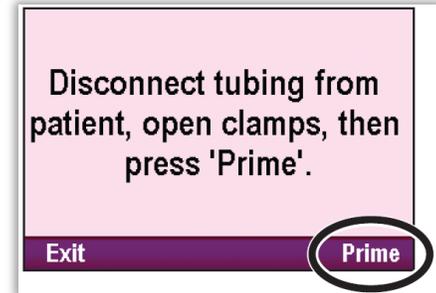
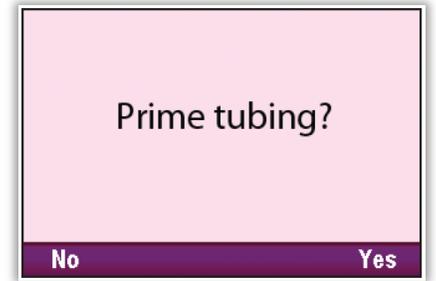


Saving ...

PRIME TUBING

Prime the tubing before connecting it to the patient's infusion set.

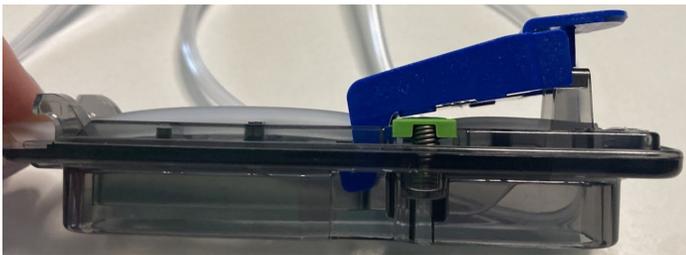
1. When a cassette is attached after the pump is powered on, a “Prime Tubing?” screen always appears
2. Select Yes
3. Unlock the keypad, if required
4. If you have not already done so, disconnect the tubing from the patient, open the clamps and select Prime
5. Stop priming at any time by selecting Stop Priming. Priming automatically stops after 10 mL are primed. Continue priming as needed.



Priming to Prevent Air In Line alarms

Remove the blue flow stop device before spiking bag

When green button is released, the tubing will be clamped



Prime with
LEVER SIDE DOWN

Will allow the air to be
removed before priming

Press to
manually
prime



Pump will alarm "AIR IN LINE" from champaign bubbles clinging to the tubing along the cassette, when the single air bubble is tallied to equal 2mL

Pump Will Prompt the User

Turn pump on &
wait for start up
(home screen)

Attach cassette AFTER
start up complete
(home screen)

Pump will prompt user:

- Do you want to reset the Res Vol?
- Do you want to prime the tubing?
- Do you want to start the pump?

If you attach the cassette before start up is complete, the pump will not display prompts

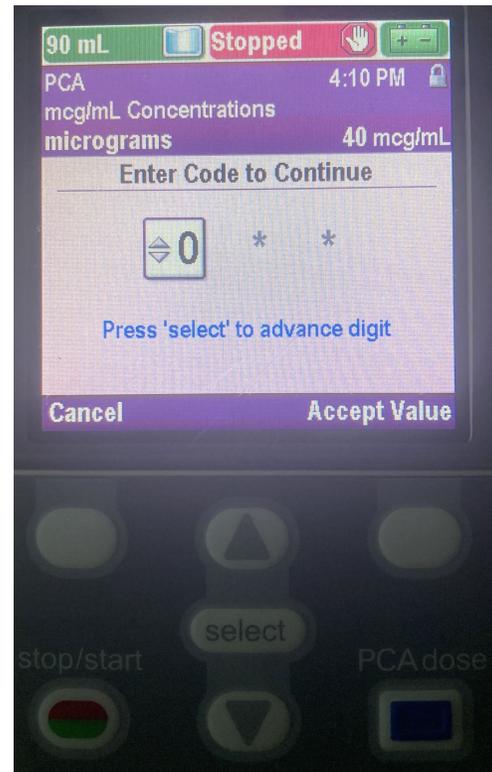
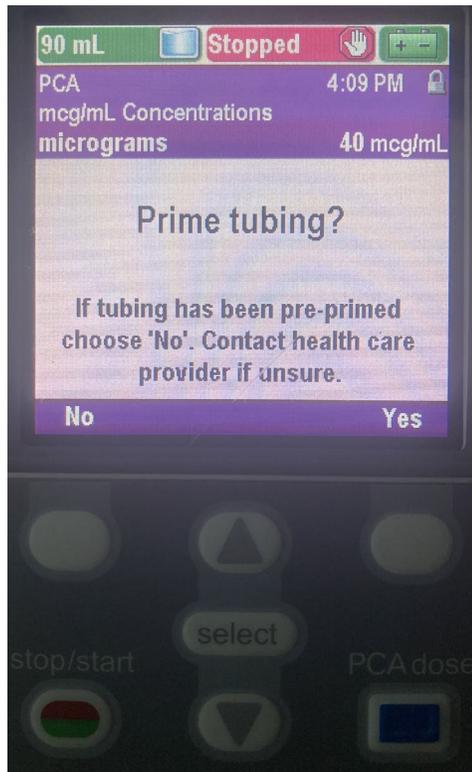
—————
Patient can be instructed to remove the cassette & reattach to be prompted

OR

To go into tasks to Reset the Res Vol & Prime, before starting the pump with the
Stop/Start button

Ensure Priming Security has been turned off

When programming the pump, the pharmacy **MUST** TURN OFF THE PRIMING SECURITY



You should NOT be asked to enter the code to prime the pump.
If you are, we will need to resolve without giving the patient the code (also allows to change the pump parameters).

- Nurse in the home calls the pharmacy and it talked through adjusting the priming security to OFF
- Nurse in the home calls the pharmacy to arrange a new pump to be sent with the priming security OFF

CODE: 201

- Use the up down arrows to adjust value
- Use SELECT or ACCEPT VALUE to enter each numeral

Stopping the CADD Solis Pump

1. Press **STOP/START**.
Pump displays Stop Pump?
2. Press Yes.
Pump displays Pump is Stopping.
3. Clamp the tubing and disconnect from patient.
4. Unlock the **cassette latch** and remove cassette.



- Remind patients pumps must be returned to the pharmacy when therapy is completed.
- Pumps are not disposable!
- The Pharmacy will arrange UPS pickup for return.



Video Resources

Video tour of outside of pump

<https://youtu.be/E9xmBJ4qMKg>

Battery use video

https://www.youtube.com/watch?v=ensXR-Qw7r4&list=PLW3_3QzmcLTxRW91c7NuFCagVFJX0XL2-&index=23

Pump use demonstration

https://www.youtube.com/watch?v=vBkg1c9gU_Y&list=PLW3_3QzmcLTxRW91c7NuFCagVFJX0XL2-&index=20&t=8s

Product Label

Product label to be reviewed with each dose or bag change.

Pump settings to be reviewed on the pump with each dose or bag change.

Pharmacy contact information at the top of the product label.

Product label components to review:

- Patient name
- Medication name
 - Dose
 - Diluent name and volume
- Administration instructions
 - Plan language instructions
 - Pump parameters
 - To be verified on pump with each bag change.
 - How often to change the bag if continuous
- Storage instructions
 - Including how long to warm to room temperature if refrigerated.
- Expiration date

Antelope Valley Home Infusion
 1600 West Avenue J, Lancaster, CA 93534
 800-808-0776 / 661-949-5092

^PT:~^ DOE, JOHN
 123 Main Street
 Lancaster, CA 93534

MD: Michael Cohen
 RX#: 123-2

DOSES: 5

CONTENTS:MILRINONE 0.8MG/ML 126 ML DEXTROSE (EOT 1/12 UNITS:3 (EOT 1/12/24)

DIRECTIONS:
 INFUSE 2.2 ML/HR INTRAVENOUSLY BY CONTINUOUS INFUSION VIA PICC LINE TO PROVIDE 0.375MCG/KG/MIN BASED ON A DOSING WEIGHT OF 78KG. 0.375 MCG/KG/MIN X 78KG = 29.3 MCG/MIN OR 1755 MCG/HR=1.8 MG/HR, CONC:0.8MG/ML. RATE:2.2ML/HR, RESERVOIR VOLUME: 126 ML.** CHANGE BAG EVERY 48 HOURS **BAG CONTAINS OVERFILL**

*****KEEP REFRIGERATED*****

WARM TO ROOM TEMPERATURE PRIOR TO INFUSION.

DISCARD AFTER:01/28/2023 - SFDAVIDSON
 FEDERAL LAW PROHIBITS THE TRANSFER OF THIS DRUG TO ANY PERSON OTHER THAN THE PRESCRIBED PATIENT.

DOSES: 17

VANCOMYCIN 1 GM IN NS TOT VOL 200ML ELA (EOT 1/1

Contains:
 VANCOMYCIN (SAGENT)
 SOD CHLORIDE 0.9% (BAXTER)

INFUSE INTRAVENOUSLY OVER 70 MINUTES EVERY 12 HOURS VIA ELASTOMERIC DEVICE. REMOVE FROM REFRIGERATOR AT LEAST 2 HOURS PRIOR TO ADMINISTRATION.
 *****KEEP REFRIGERATED*****

DO NOT DRAW LABS FROM LINE UNLESS AUTHORIZED BY PHYSICIA

Original Fill:01 11 23 REFRIGERATED
 Filled:01 11 23 NHUD Discard After:01 20 23

CONTENTS: UNITS: 14
 CEFEPIME (WG CRITICAL CARE) 2 GM
 SODIUM CHLORIDE 0.9% (BAXTER) 7.5 ML

DIRECTIONS:
 ADMINISTER CEFEPIME 2 GRAMS/20 ML INTRAVENOUSLY OVER THREE (3) TO FIVE (5) MINUTES EVERY 12 HOURS AS DIRECTED BY PHYSICIAN.
 ***** COMPOUNDED DRUG PRODUCT / KEEP REFRIGERATED *****

^NO LAB DRAW FROM LINE UNLESS APPROVED BY PHYSICIAN~

DISCARD AFTER: 01/25/2023 FILLED BY: NHUDSON
 FEDERAL LAW PROHIBITS THE TRANSFER OF THIS DRUG TO ANY PERSON OTHER THAN THE PRESCRIBED PATIENT.

CADD Solis Alarms/Troubleshooting

Alarm	Corrective Action
General alarms	<p>Silence will quiet the pump until acknowledged Alert will repeat every 2 minutes until acknowledged Once acknowledged if the problem is not resolved the pump will alarm in 5 minutes Many of the alarms have a help screen to walk you through resolving alarm</p>
Air in line alarm	<p>Silence & acknowledge alarm Disconnect from the patient Prime tubing until air is discharged Priming can be found under tasks Best practice to prime the pump positioned on its side with the lever side down Champaign bubbles stuck in the tubing by the air detector (why we prime w/ the lever side down. Remove the cassette Flick the cassette tubing to get the bubbles past the cassette May need to manually prime to watch the air bubbles move Prime by pressing the green button</p>
Priming	<p>Found in TASKS Scroll down to highlight PRIME & Press SELECT Priming volumes Regular remote reservoir tubing – 10ml priming volume Hi Volume tubing – 20ml priming volume</p>

CADD Solis Alarms/Troubleshooting

Alarm	Corrective Action
Resetting the Reservoir Volume	After attaching the cassette to the pump, the pump will prompt you to reset the res vol If not changing the tubing cassette: Reset Reservoir Volume is found under tasks, scroll down to highlight PRIME & Press SELECT
Battery Door	A quarter can be used to rotate the battery door lock The door can be snapped on and off the hinge
Battery	Battery icon will turn amber/orange at 25% power. Rechargeable battery will take 4 hours to fully charge with AC Adaptor
Pump Permeameters	Pressing the soft button under Program will display the pump parameters You must stop the pump to adjust/titrate the setting Keypad Code: 201
Back Soft Button	Pressing the soft button under back will take you to the Home Page
Locking Pump	If unlocked, press the soft button under TASKS The right soft button will read LOCK KEYPAD
Interrupted Infusions	If you stop the infusion early, the pump will ask the user if they would like to TAPER DOWN INSTEAD TAPER DOWN will allow the pump to slowly reduce the rate to stopped over the set about of time (typically about 1 hour). The user will need to answer YES or NO

CADD Solis Alarms/Troubleshooting

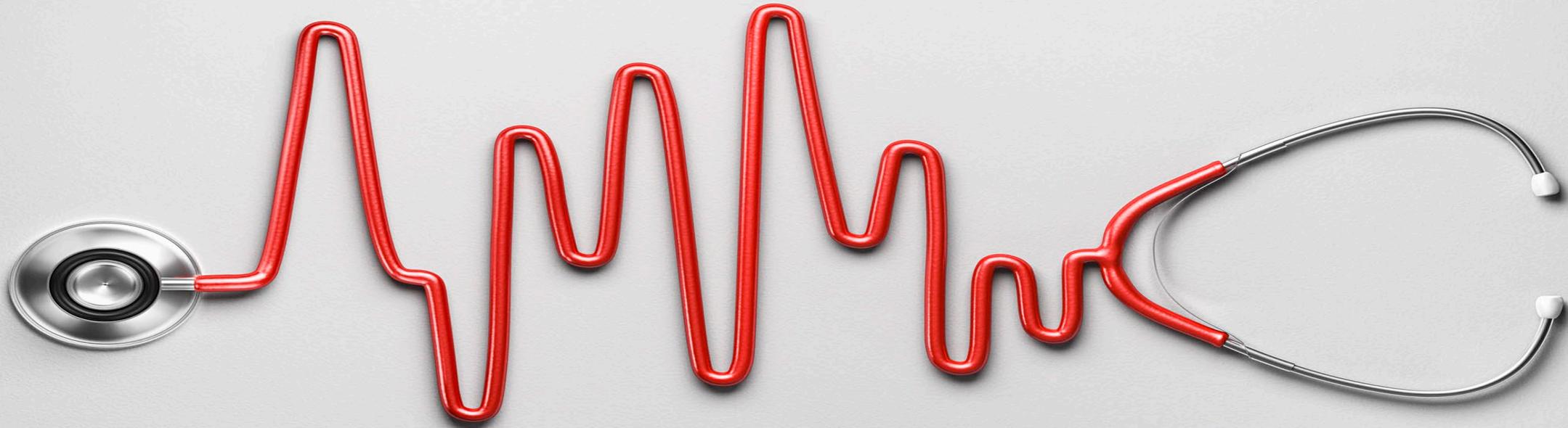
Alarm	Corrective Action
Battery removed. Pump will not run.	The pump is stopped and the rechargeable battery pack or the 4 AA batteries were removed, but the pump is still powered by the AC adapter. Select Acknowledge to clear the alarm. Install a fully charged rechargeable battery pack or 4 new AA batteries. To start delivery, good batteries must always be installed, even when an external source of power is connected.
Downstream occlusion.	Clear occlusion (a kink in the fluid path, or a closed tubing clamp) between pump and patient .
High flow admin set required. Remove cassette.	The delivery-specific parameters are programmed to values that cause the maximum rate of delivery to exceed 250 mL/hr. You must remove the standard volume cassette and attach a high flow administration set to continue.
High volume admin set not allowed. Remove cassette.	The CADD® high volume administration set cannot be used. The pump is stopped and will not run. Remove the high-volume administration set and attach the standard administration set to continue.
Upstream occlusion.	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. Clear occlusion between pump and reservoir .

CADD Solis Alarms/Troubleshooting

Problem	Solution
A continuous two-tone alarm is sounding, and the amber light is lit or flashing.	Delivery has stopped. If the display is blank or contains random characters, the 4 AA batteries or the rechargeable battery pack may be depleted. Install 4 new AA batteries or a rechargeable battery pack.
The pump is sounding 2 beeps every 2 seconds, and the amber light is flashing.	Refer to the list of Alarms.
Three beeps sound every 5 minutes.	This is a reminder that the pump is stopped.
After installing 4 new AA batteries and powering up the pump, no screen appears and no beep sounds.	The batteries may be installed incorrectly. Review the procedure for installing batteries. Be sure to match the polarity (+ and –) markings inside the battery door with the markings on the batteries. If there is still no power, the batteries may be completely depleted.
Tubing selection	Remote Reservoir Tubing (regular tubing) will run 0.1 – 200ml/hr Hi Vol tubing will run up to 500ml/hr (will run at slower rates as well) Can not be used for PCA or inotropes The max infusion rate for the Solis pump is 500ml/hr & must use Hi Vol Tubing If the wrong tubing is used on the pump, the pump will prompt the clinical to use the correct tubing.

CADD Solis Alarms/Troubleshooting

Problem	Solution
Patient requesting pump code	<p>Priming code → the pharmacy is to turn off priming code when programming the pump Pump will need to be returned and a new pump sent out. The code is 201 The nurse can be given this code. This code also allows the patient to adjust the rate and volume of the infusion</p>
Event Log	<p>Press the soft button under TASKS Arrow down to VIEW REPORT Press SELECT Arrow down to EVENT LOG Press SELECT You will view the 500 keystrokes NOTE- push the UP ARROW to view</p>
Delay Start	<p>Allows the nurse or caregiver to start the infusion before the dose is due. The pump will beep when the infusion automatically starts as scheduled. The delay start code is 201. If a caregiver needs the delay start code, recommend having the pharmacy send out a new pump with the delay start security turned OFF</p>



Please reach out with questions or for information on additional training opportunities.

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