Appendix F

CADD-Solis Ambulatory Infusion System Version 3.0

with Programmed Intermittent Bolus Protocol

Programming using Code or Key

A Battery Compartment
B Display
C Indicator Lights
D USB Port
E Blue AC Power Light
F AC Power Jack
G Remote Dose Cord Jack
H Keypad I Cassette Latch
J Cassette/Keypad Lock
K Power Button

Unlock/Lock using Key. Key can be used to lock pump clamp to IV poles also

Note: Suggest that all demand /delivers and reservoir volume documented each time prior to program manipulations as ordered. .(CNC Acute Pain Service GHB)

Setting up the pump for a new patient

Prepare the pump for a new patient

1. Begin without the cassette attached to the pump.
2. Insert *four new 1.5volt AA alkaline batteries* or a rechargeable battery pack.
3. Press the power switch to turn the pump on

Start new patient

4. Screen displays Do you want to start a new patient? Press Yes.
5. The Select Therapy menu is displayed.
6. Scroll ↑or ↓to highlight the desired therapy. Press “Select”.
7. Scroll ↑or ↓ to highlight the desired qualifier. Press “Select”.
8. Scroll ↑or ↓ to highlight the desired drug and concentration (or unit). Press Select.
9. Unlock the keypad using the security code or the pump key.
10. Confirm that you have selected the correct therapy, qualifier, drug and concentration [or unit]. Verify and press Yes.
11. Review pump settings displays. Press Review.
12. To edit for a patient specific parameter press “Select”. Scroll ↑or↓ to the new value then press Save
    NOTE: 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 onetime override of the intermittent bolus cycle as defined by the bolus interval
13. Continue until all patient specific parameters have been reviewed and/or edited. Press Accept Value for each setting. A check mark appears next to each patient specific parameter you have accepted.
14. To change a patient specific parameter after you have accepted it, repeat step 12. When completed press Next.
15. Cassette not attached. Attach cassette before starting pump. is displayed. When programming for the new patient is complete
16. Attach, latch, and lock the cassette to the pump.
17. Prime Tubing? displays. Press Yes if priming is needed.
18. Disconnect tubing displays. Press Prime. Press Stop Priming when complete.
19. Continue Priming? displays. Press Yes or No.
20. Start pump? displays. Press Yes when you are ready to begin the infusion. The pump begins running.

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
1. Scroll ↑or↓ 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 ↑or↓ to the new value then press Save.

NOTE: If the desired value is outside the soft limit, press Confirm. Verify the soft limit override by pressing Yes. 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.
4. Verify that the keypad and cassette are locked.

Changing a patient s current program with the pump stopped

Stop the pump
1. Press Stop/Start.
2. Stop Pump? displays. Press Yes.

Program the pump
3. Scroll ↑or↓ to highlight the patient specific parameter you want to change. Press Select.
4. Unlock the keypad using the security code or the pump key.
5. The patient specific parameter is displayed. Scroll ↑or ↓to the new value then press Save.

NOTE: 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. Repeat steps 3 and 5 for each patient specific parameter that you want to change.

When programming is complete
6. Press Stop/Start.
7. Review pump settings displays. Press Review.
8. Choose Accept Value to confirm the value is correct for the highlighted patient specific parameter or press. Select to edit the highlighted parameter.
9. Continue until all patient specific parameters have been reviewed, accepted and display checkmarks. Press Next.
10. Start Pump? displays. Press Yes.

NOTE: *If a security code was used to unlock the keypad, the keypad automatically relocks when the pump is started. If a key was used to unlock the cassette/keypad, use the key to relock the cassette/keypad lock.*

Resetting the reservoir volume without changing the cassette

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 ***(at bag completion if prior to or at 24hrs (GHB)***
3. Scroll ↓until Reservoir Vol is highlighted. Press Select.
4. Screen displays Reservoir Volume remaining: XXmL Reset? Press Yes.
5. Unlock the keypad using the security code or the pump key.
6. The screen displays the current reservoir volume and a scroll range.
7. Press Select to reset the reservoir volume or scroll ↑or↓ to adjust the value. Press Save.

When programming is complete
8. Press Stop/Start.
9. "Review pump settings" displays. Press Review.
10. Choose Accept Value to confirm the value is correct for the highlighted patient specific parameter or press Select to edit the highlighted parameter.
11. Continue until all patient specific parameters have been reviewed, accepted and display checkmarks. Press Next.
12. "Start Pump"? displays. Press Yes.

NOTE: If a security code was used to unlock the keypad, the pump will automatically relock when the pump is started. If a key was used to unlock the cassette/keypad, use the key to relock it.

13 If you're not starting the pump immediately, press No when "Start Pump"? appears. Lock the keypad by pressing the right soft key twice (Tasks then Lock Keypad). Ensure that the cassette is also locked by turning the cassette/keypad lock clockwise to the locked position.

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 or 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.

Appendix F

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with Programmed Intermittent Bolus Protocol

NOTE: Never leave the pump unattended while on the Clinician Bolus Edit screen. You must press Deliver to deliver the programmed value or Cancel to leave the screen

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Viewing reports.

Pump reports should be cleared in accordance with institution policy.

Pump may be running or stopped to view reports

Option 1:

1. From the home screen press Reports. Scroll ↑or ↓to the desired report and press Select.
2. Press Back to return to the Reports menu, and then press Back again to return to the home screen.

Option 2:

1. From the home screen press Tasks. Scroll to View Reports and press Select. Scroll↑ or↓ to the desired report and press Select.
2. Press Back to return to the Reports menu. Press Back again to return to the home screen.

To clear Given and PCA dose counters *(at bag change GHB)*

1. From the home screen press Reports. Scroll ↑or ↓to the Given and PCA Dose Counters report. Press Select.
2. Choose Clear Given to clear Total Given and set a new time.
3. Scroll down ↓to PCA doses Given/Attempted. Press Clear Doses to clear and set a new time.
4. Press Back to return to the Reports menu, and then press Back again to return to the home screen.

Changing the batteries Stop the pump

Stop the Pump

1. Press Stop/Start
2. "Stop Pump"? displays. Press Yes.
3. Remove the used batteries.
4. Insert the new batteries.
5. Press the power switch to turn the pump on.
6. The screen displays "Do you want to start a new patient?" Press No.
7. Press Stop/Start to start the pump.
8. Start Pump? displays. Press Yes

Screensaver

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

Alarms and troubleshooting

Alarm Conditions

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.

Alarms and troubleshooting continued

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 cannot 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 charged 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 *(GBH 4hrly limit breached)*

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)

At GHB: (usually 4-hrly) limit has been reached fully assess patient pain, notify Acute Pain Service (APS) Dr *280 that Limited post notification/review by APS Limit can then be re-set as instructed by APS. Document all details on device: demands/deliveries and volume remaining on appropriate documentation.

Select Task, scroll ↓ to "new Protocol same patient" select. This clear previous limit set and volume infused. Staff will be required to re-enter actual volume left in infusion solution.

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Pump s status bar reads "Del Limit"

Alarm Priority Low. The programmed delivery limit has been reached, and the pump is delivering fluid at 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).

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 Medium or Low (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 High. 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 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.

Attaching a cassette

1. Open the cassette latch. **PLEASE NOTE:** The latch handle DOES NOT need to be held open during cassette latch-up. Do not push down on the latch handle while attaching/latching the cassette.

2. Insert cassette hooks into the hinge pins on the bottom of the pump, then swing cassette into latch position. Press firmly on the latch side of the cassette. There will be a distinct click when the cassette is fully inserted.

3. Lift the cassette latch into the closed position. The latch handle should be able to turn to the closed position with minimal-to-no resistance. If resistance is experienced, DO NOT FORCE the handle to turn. Resistance in the latch handle indicates the cassette is not fully inserted.

4. Visually verify the cassette is attached correctly by looking at the pump with the cassette attached. Looking from left to right, the top of the cassette should line up evenly with the bottom of the pump. An uneven gap indicates that the cassette is not properly attached

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Alarm screens are color coded too

Low Priority Alarm

- Battery low
- Delivery limit reached
- Reservoir Volume low
- AC adapter disconnected

Medium Priority Alarm

- Reservoir Volume low
- PCA dose cord disconnected
- A setting was edited, but not saved
- Battery depleted while pump stopped
- Cannot start pump

High Priority Alarm

- Air in line detected
- Battery depleted while pump running
- Downstream occlusion
- Upstream occlusion
- Reservoir volume is zero

System Fault

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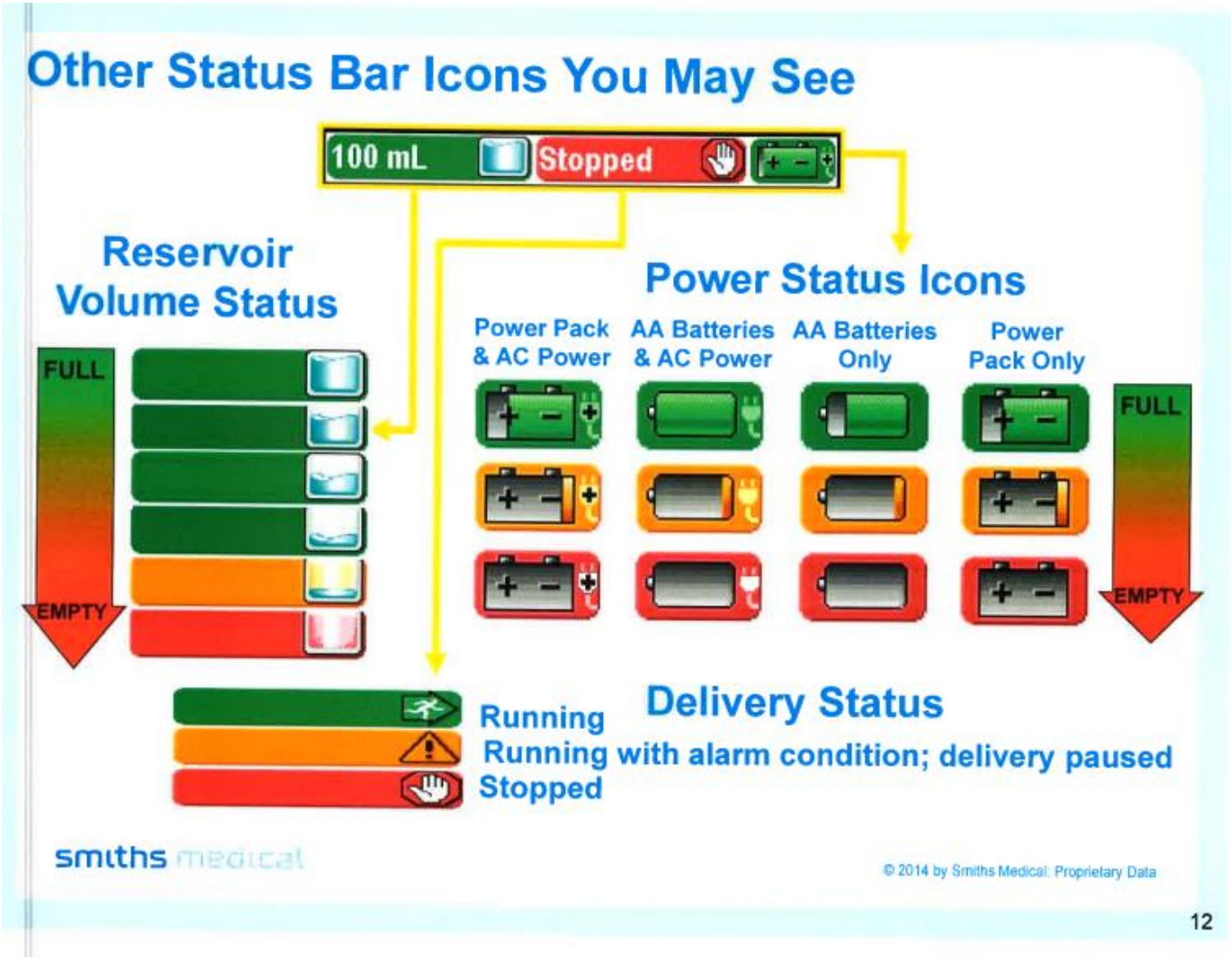
Other Status Bar Icons You May See
100 mL
Stopped
Reservoir Volume Status
FULL
EMPTY
Power Status Icons
Power Pack & AC Power
AA Batteries & AC Power
AA Batteries Only
Power Pack Only
FULL
EMPTY
Delivery Status
Running
Running with alarm condition; delivery paused
Stopped
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