

Clinician Information



CADD-Prizm®
PCS / Pain Control System
Model 6100 and 6101
Ambulatory Infusion Pump

CADD-Prizm® PCS/Pain Control System Model 6100 and 6101 Ambulatory Infusion Pump

This booklet provides guidelines for the use, care and maintenance of the CADD-Prizm® PCS ambulatory infusion pump. The Operator's Manual provided with this product contains warnings and cautions that the user should be aware of for the safe use of the product. Failure to follow warnings and cautions could result in death or serious injury to the patient. If you have any questions regarding these systems, please contact the Clinical Services department at 1-800-258-5361.

WARNING:

- *If the pump is dropped or hit, inspect the pump for damage. Do not use a pump that is damaged or is not functioning properly. Contact Customer Service to return a pump for service.*
- *If the pump is dropped or hit, the battery door may become broken or damaged. Do not use the pump if the battery door is damaged because the battery will not be properly secured; this may result in loss of power or non-delivery of drug.*
- *Do not disclose to the patient the pump's security codes or any other information that would allow the patient complete access to all programming and operating functions.*
- *You must use a CADD® extension set with anti-siphon valve or a CADD® administration set with either an integral or an add on anti-siphon valve to protect against unregulated gravity infusion that can result from an improperly attached cassette.*
- *Failure to properly follow warnings, cautions, and instructions could result in death or serious injury to the patient.*

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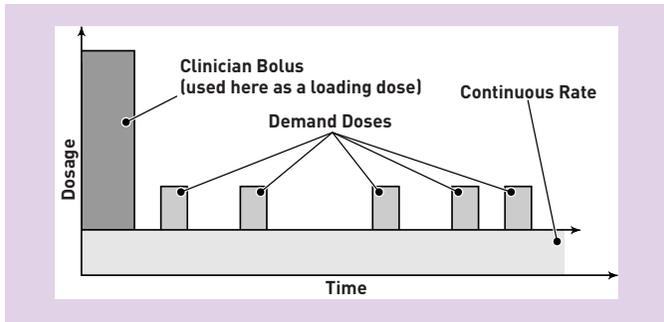
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Description of the CADD-Prizm® PCS Pump

The CADD-Prizm® PCS (Pain Control System) pump is used for therapies that require the following types of delivery:

- Continuous Rate
- Demand Dose, activated by the patient
- Clinician Bolus, activated by the clinician (for example, as a loading dose)

You may program each delivery method individually or in combination with each other. The following diagram illustrates these three methods of delivery:



Epidural/Subarachnoid Administration

The selected drug must be used in accordance with the indications included in the package insert accompanying the drug. Administration of any drug by this pump is limited by any warnings, precautions, or contraindications in the drug labeling.

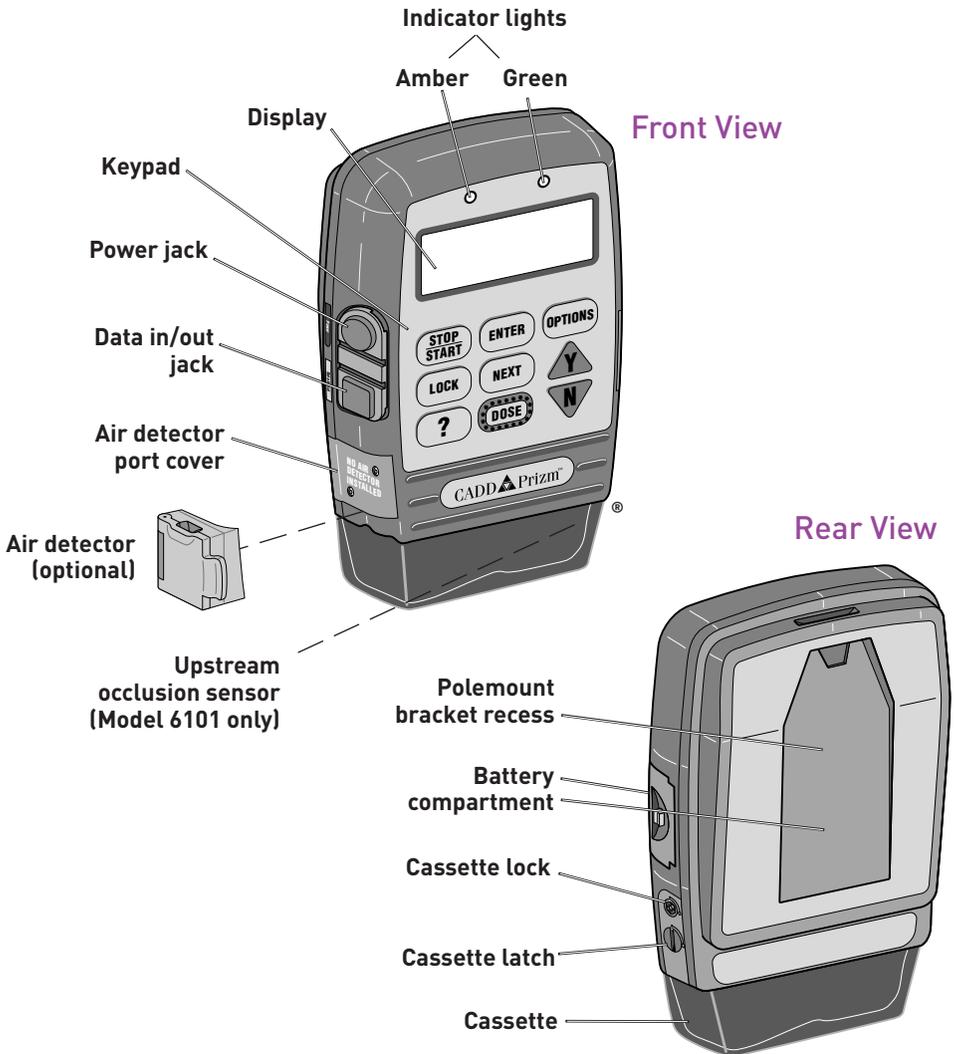
Analgesics - Administration of analgesics to the epidural space is limited to use with indwelling catheters specifically indicated for either short- or long-term drug delivery. Administration of analgesics to the subarachnoid space is limited to use with indwelling catheters specifically indicated for short-term drug delivery.

Anesthetics - Administration of anesthetics to the epidural space is limited to use with indwelling catheters specifically indicated for short-term drug delivery.

WARNING:

- *Do not administer drugs to the epidural space or subarachnoid space unless the drug is indicated for those spaces.*
- *To prevent the infusion of drugs that are not indicated for epidural space or subarachnoid space infusion, DO NOT use administration sets that incorporate injection sites.*
- *If a medication cassette reservoir, CADD® extension set or CADD® administration set is used for epidural space or subarachnoid space drug delivery, it is strongly recommended that it be clearly differentiated from those used for other routes of infusion, for example, by color coding, or other means of identification.*

Pump Diagram



Callout Descriptions

Indicator Lights

- Green flashes when the pump is running
- Amber flashes when the pump is stopped or alerting to an alarm; lit continuously when the pump is inoperable

Display

Shows programming information and messages

Power Jack

Connects to a CADD® External Power Source (EPS) system power pack or an AC adapter for wall outlet

Data In/Out Jack

Used for attaching accessories:

- Interface cable for printing reports
- Remote dose cord for remote operation of the dose key
- Modem cable for communications

Cassette

The portion of the reservoir or administration set that attaches to the bottom of the pump

Polemount Bracket Recess

Bracket slides into the recess on the back of the pump, for attaching the pump to an IV pole

Keypad

-  Starts and stops pump delivery
-  Displays or changes the lock level; allows access to the clinician bolus
-  Displays more information for a screen or an alarm message
-  Saves a new value when programming; records a selection from a menu; clears recordkeeping screens
-  Scrolls through programming screens without changing the settings; returns you from the Biomed Toolbox menu to the Options menu, or from the Options menu to the main screen
-  Delivers a programmed amount of medication
-  Displays the Options menu
-  Answers “yes,” increases values on programming screens, or scrolls through items on a menu
-  Answers “no,” decreases values on programming screens, scrolls through items on a menu, or cancels printing

Installing a Battery

Use a fresh, 9 volt alkaline or lithium battery such as the DURACELL® Alkaline MN 1604, the EVEREADY® ENERGIZER Alkaline #522 or the ULTRALIFE® Lithium U9VL battery. The pump retains all programmed values while the battery is removed. If the pump is running, you may connect an external power source to keep the pump running for 3 minutes while you change the battery.

CAUTION:

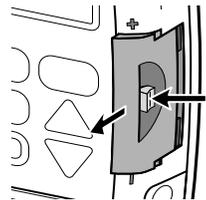
- Do not store the pump for prolonged periods with the battery installed. Battery leakage could damage the pump.

WARNING:

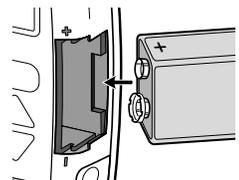
- If the pump is dropped or hit, inspect the pump for damage. Do not use a pump that is damaged or is not functioning properly. Contact Customer Service to return a pump for service.
- If the pump is dropped or hit, the battery door may become broken or damaged. Do not use the pump if the battery door is damaged because the battery will not be properly secured; this may result in loss of power or non-delivery of drug.
- There is no pump alarm to alert users that a battery has not been properly installed or has become dislodged. An improperly installed or dislodged battery could result in loss of power and non-delivery of drug.
- Do not use rechargeable NiCad or nickel metal hydride (NiMH) batteries. Do not use carbon zinc ("heavy duty") batteries. They do not provide sufficient power for the pump to operate properly.

To Install a Battery

1. Make sure the pump is stopped. Press the button on the battery door and slide the battery door forward. Remove the used battery.



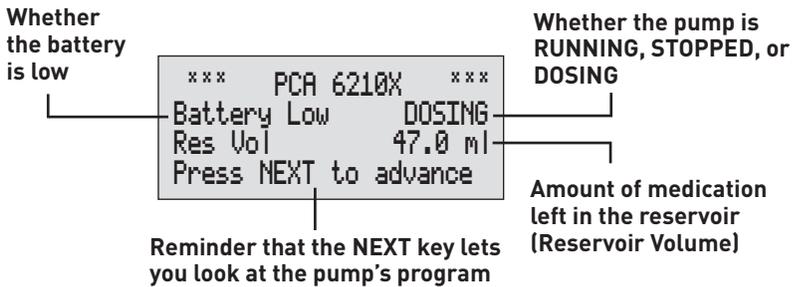
2. Match the + and - markings on the new battery with the markings on the pump. Insert the battery. The pump will beep if the battery is inserted correctly.



3. Replace the battery door.

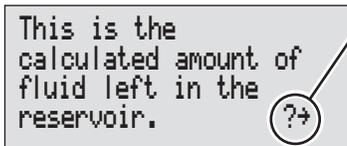
The Main Screen

The main screen is the starting point for programming or viewing the pump's settings. It shows the following:



Getting Help Using the (?) Key

For more information about a screen or message on the pump's display, press the (?) key to view the help screens.



The symbol (?) in the lower right corner means there are more help screens. Press (?) again to see the next help screen.

- To page through all the help screens, press (?) repeatedly. The original screen will reappear when no further help is available.
- To exit help, press any key (other than the (?) key). This will bring you back to the original screen.

NOTE: If you press the DOSE key, the pump will deliver a PCA dose, if available.

- If a help screen tells you to press a certain key, first exit help, then press that key.

Help screens are lock-level dependent. If the pump's current lock level prevents access to a certain function, the function will not be described in the help screens.

Lock Level Table

Lock levels are used to limit patient access to certain programming and operating functions. This table lists the operations that are accessible in each lock level while the pump is stopped and running. LL0 permits complete access to all programming and operating functions. LL1 permits limited control of pump programming and operations. LL2 permits only minimal control of the pump.

Pump Operations and Programming	Stopped		Running	Any Lock Level
	LL0	LL1	LL2	
Stop/Start the pump	Yes	Yes	Yes	Yes
View Help screens	Yes	Yes	Yes	Yes
Print	Yes	Yes	Yes	Yes
Reset Reservoir Volume	Yes	Yes	Yes	No
Change the lock level	Yes, w/code	Yes, w/code	Yes, w/code	No
Start a Demand Dose	No	No	No	Yes
Start a Clinician Bolus	No	No	No	Yes-w/code
Change Units	Yes	No	No	No
Change Concentration	Yes	No	No	No
Change Continuous Rate	Yes	Up to LL0 value	No	No
Change Demand Dose	Yes	Up to LL0 value	No	No
Clear Dose Counters	Yes	Yes	No	No
Clear Given amount	Yes	Yes	No	No
Add New Patient Marker	Yes	No	No	No
Pump Options				
Prime	Yes	Yes	No	No
Extended History (view)	Yes	Yes	Yes	Yes
AutoLock	Yes	View only	View only	View only
Time	Yes	View only	View only	View only
Date	Yes	View only	View only	View only
Air Detector On/Off	Yes	View only	View Only	View Only
Event Log (view)	Yes	Yes	Yes	Yes
Biomed Toolbox	Yes, w/code	No	No	No

Changing to Lock Level 0 (LL0)

Before programming the pump, make sure the lock level is LL0 so you can access all programming screens.

1. Make sure the pump is stopped.
2. Press **LOCK**. The current lock level will appear. (If the lock level is already LL0, press **NEXT** to exit.)



Lock Level
⬆ LL2

3. Press **▲** or **▼** until "LL0" appears.



Lock Level
LL0

4. Press **LOCK** again. "000" will appear.



Lock Level Code
000

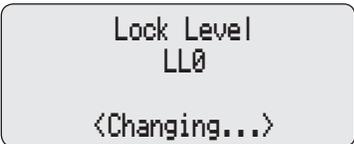
5. Press **▲** or **▼** until the lock level code appears. (See the Operator's Manual for the lock level code.)



Lock Level Code
XXX

6. Press **LOCK** to set the new lock level.

*NOTE: To check the lock level, press **LOCK**. Then press **NEXT** to return to the screen you were on.*



Lock Level
LL0

<Changing...>

Programming

WARNING: System delivery inaccuracies may occur as a result of back pressure or fluid resistance, which depends upon drug viscosity, catheter size, and extension set tubing (for example, microbore tubing).

1. Begin at the Main Screen

- Make sure the pump is in Lock Level 0.
- Make sure the pump is stopped. (STOPPED should appear on the main screen.)
- Press **NEXT** to begin.

```
*** PCA 6210X ***
          STOPPED
Press NEXT to advance
```

2. Enter the Reservoir Volume

- Press **▲** or **▼** to select the volume of a filled reservoir. (If you do not wish to use the Reservoir Volume feature, scroll down to “Not In Use” located before 1.)
- Press **ENTER**.

```
Reservoir Volume
  ⚡ 100.0 ml
<Range: 1 - 9999>
```

3. Enter the Units

If the correct units are displayed, press **NEXT**.

Or, to change the units:

- Press **▲** or **▼** to select the desired programming units.
- Press **ENTER**.
- Press **▲** to confirm the change.

NOTE: If the prescription calls for milliliters, enter milliliters and skip to step 5.

```
Units
  ⚡ Milligrams
<Range: mg or ml>
```

```
Change Units to
  Milligrams?
Press Y or N
```

4. Enter the Concentration of the Drug

This screen will not appear if the units are milliliters; go to step 5.

- Press ▲ or ▼ to select the concentration of the drug. (If you cannot select the desired concentration, it may have been turned off; consult the appropriate personnel in your facility.)

```
Concentration
  ⚡ 1.0 mg/ml
<Range: 0.1 - 100>
```

- Press **ENTER**.
- Press ▲ to confirm the change.

NOTE: If you change the concentration, you must enter the continuous rate and demand dose.

```
Change Concentration
to 1.0 mg/ml?

Press Y or N
```

5. Enter the Hourly Continuous Rate

- Press ▲ or ▼ to select the hourly continuous rate of drug delivery. (If the prescription does not call for a continuous rate, scroll to zero.)

```
Continuous Rate
  ⚡ 5.00 mg/hr
<Range: 0 - 30.00>
```

NOTE: If you intend to run the pump in lock level 1 so the continuous rate can be varied, you should enter the maximum allowable rate. After programming, you may then change to lock level 1 and decrease the rate to its starting value.

- Press **ENTER**.

NOTE: If "Change Rate to...?" appears, you must confirm the rate because the units or concentration was changed, or the rate is greater than or equal to 100 mg/hr or mcg/hr. Press ▲ to confirm, or press ▼ and re-enter the rate.

6. Enter the Demand Dose Amount

- Press **▲** or **▼** to select the amount to be delivered when the patient requests a demand dose. If the prescription does not call for a demand dose, enter zero.

Demand Dose
⚡ 2.50 mg
<Range: 0 - 9.90>

NOTE: If you intend to run the pump in lock level 1 so the demand dose can be varied, you should enter the maximum allowable dose. After programming, you may then change to lock level 1 and decrease the dose to its starting value.

- Press **ENTER**.

*NOTE: If "Change Demand Dose to...?" appears, you must confirm the dose because the units or concentration was changed, or the dose is greater than or equal to 100 mg or mcg. Press **▲** to confirm, or press **▼** and re-enter the dose.*

7. Enter the Demand Dose Lockout Time

If demand dose is zero, this screen will not appear; go to step 10.

- Press **▲** or **▼** to select the desired lockout time between doses (the minimum amount of time that must elapse between the time one demand dose starts and the time the next demand dose starts).

Demand Dose Lockout
⚡ 15 Min
<Range: 5 min-24 hr>

- Press **ENTER**.

WARNING: When you enter a new demand dose lockout time, any lockout time in effect will be cleared. A demand dose could be requested and delivered immediately upon starting the pump, resulting in over-delivery.

8. Enter the Max Doses Per Hour

This screen will appear only if the Max Doses per Hour function is on. If demand dose is zero or the lockout is one hour or greater, this screen will not appear; go to step 10.

- Press ▲ or ▼ to select the maximum number of doses allowed per hour.

WARNING: When you enter a new max doses per hour value, any lockout time in effect will be cleared. A demand dose could be requested and delivered immediately upon starting the pump, resulting in over-delivery.

```
Max Doses Per Hour
  † 2
<Range: 1 - 4>
```

NOTES:

- The number shown on this screen may be outside of the range; this can happen when the demand dose lockout time is changed but the max doses per hour number is not adjusted. If you scroll through the numbers, you'll notice that only numbers within the range will appear.
- The lockout time is determined by the demand dose lockout time or the max doses per hour, whichever limits dose frequency more.
- Press .

9. Clear the Dose Counters

If demand dose is zero, this screen will not appear; go to step 10.

Dose counters include the given counter, which is the number of demand doses delivered to the patient, and the attempt counter, which is the total number of doses attempted, including doses delivered and doses locked out.

- Press if you wish to clear the dose counters. Even if the counters are zero, this updates the time and date markers.

```
Dose Counters
Given/Attempt: 0/ 0
since 06/08/96 10:35
Press ENTER to clear
```

10. Clear the Units Given

- Press **ENTER** if you wish to clear the units given (the total amount of drug delivered since the time and date shown). Even if the amount is zero, this updates the time and date markers.

```
Milligrams Given
  0.00 mg
since 06/08/96 10:35
Press ENTER to clear
```

11. Verify the Air Detector Status

This screen will appear only if an air detector is installed.

- Make sure the setting is correct.
- Press **NEXT** to continue. If you need to correct the air detector setting, see the Operator's Manual.

```
Air Detector
Required

<Review Only>
```

12. Enter a New Patient Marker (optional)

This screen will appear only if the extended history has been turned on in the biomed toolbox menu.

When you add a new patient marker, an event is added to the event log to indicate the pump was programmed for a new patient, and any information in the extended history is cleared.

*If you do not wish to add a new patient marker, press **NEXT**.*

If you wish to add a new patient marker to the event log,

- Press **ENTER**.
- Press **▲**. This will clear the extended history from the last patient and add a marker to the event log. The main screen will reappear.

```
To insert New Patient
Marker and clear
Extended History
press ENTER
```

```
Clear Extended
History and insert
New Patient Marker?
Press Y or N
```

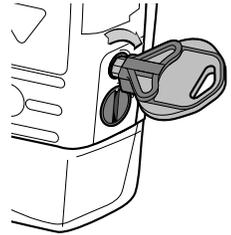
13. Review the Program

- Press **NEXT** repeatedly to review the programming screens.
- If you need to reprogram a setting, press **NEXT** until the appropriate screen appears and change the setting as described in this section.

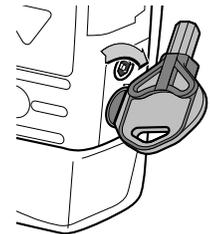
Removing a Used Reservoir or Administration Set

WARNING: Always close the fluid path tubing with the clamp before removing the cassette from the pump to prevent unregulated gravity infusion.

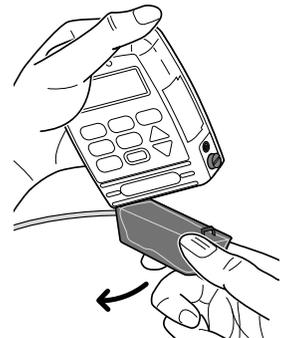
1. Close the tubing clamp.
2. Insert the key and turn the lock clockwise one-quarter turn until it stops. (The mark on the lock will line up with the open dot.)



3. Insert the side the of key or the coin into the slot and turn clockwise until the latching button pops out. (The mark on the latch will line up with the open dot.)



4. Remove the cassette hooks from the pump hinge pins.



Attaching a New Reservoir or Administration Set

Obtain a new, filled reservoir, or an administration set attached to a non-vented, flexible IV bag. Refer to the instructions for use supplied with the reservoir or administration set for information on preparing the product for use.

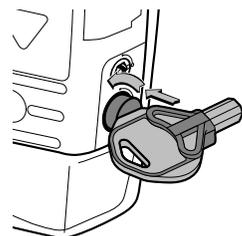
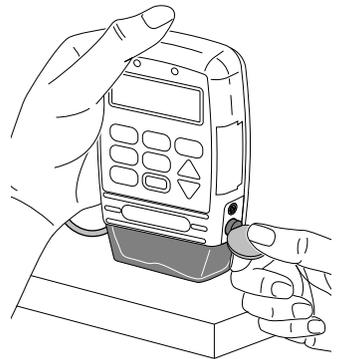
Before you attach a new reservoir or administration set, make sure a battery is installed so the pump's screens can lead you through the following:

- verifying the type of cassette
- checking whether upstream sensor is on or off (Model 6101 only)
- resetting the reservoir volume
- priming the fluid path (if the lock level is LL0 or LL1)
- changing the lock level (if AutoLock is not in use and the lock level is LL0)
- starting the pump

CAUTION: If you are using a medication cassette reservoir in which the medication is frozen, thaw at room temperature only. Do not heat in a microwave oven as this may damage the product and cause leakage.

To Attach the Cassette to the Pump

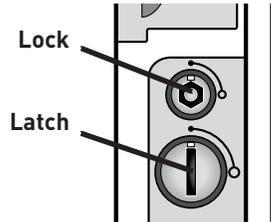
1. Clamp the tubing. Insert the cassette hooks into the hinge pins on the pump.
2. Place the pump upright on a firm, flat surface. Press down so the cassette fits tightly against the pump.
3. Insert the side of the key or a coin into the latch button, push in, and turn counterclockwise until the mark on the latch lines up with the solid dot and you feel the button click into place. A message will appear on the display so you can verify the type of reservoir or administration set you have attached.



- Insert the pump key into the lock and turn counterclockwise until the white mark lines up with the solid dot.

NOTE: The cassette must be locked in order to start the pump.

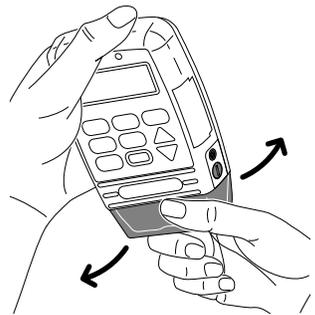
- It is essential that you attach the cassette properly. When you attach the cassette properly, the marks on the latching button and the lock line up with the solid dots on the side of the pump.



WARNING:

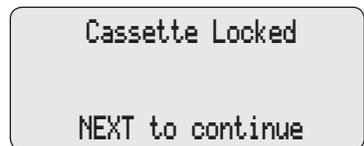
- Attach the cassette properly. An improperly attached or detached cassette could result in unregulated gravity infusion of medication from the fluid container or a reflux of blood.
- You must use a CADD® extension set with anti-siphon valve or a CADD® administration set with either an integral or an add on anti-siphon valve to protect against unregulated gravity infusion that can result from an improperly attached cassette.

- Gently twist and pull on the cassette to make sure it is firmly attached.
- The message “Cassette Locked” will appear on the display. Press **NEXT**.



- “Reset Reservoir Volume to...?” may appear.
 - To reset Reservoir Volume to the value shown, press **▲**.
 - To retain the current value press **▼**.

NOTE: If this screen does not appear, Reservoir Volume is either already reset or not in use.



Priming the Tubing and Connecting to the Patient

If the lock level is LL0 or LL1 when you attach a cassette, “Prime Tubing?” will appear in the sequence of screens. Prime the tubing before connecting it to the patient’s infusion set or indwelling catheter.

WARNING: Do not prime the fluid path with the tubing connected to a patient as this could result in over-delivery of medication or air embolism.

To Prime the Tubing and Connect to the Patient

1. When “Prime Tubing?” appears, press **Y**.
2. Make sure the tubing is disconnected from the patient and the tubing clamp is open.
3. Press and hold the **Y** key until the tubing is fully primed or until priming stops.

NOTE: Fluid delivered during priming is subtracted from the reservoir volume, but is not added to the milligrams, milliliters or micrograms given since this fluid is not delivered to the patient.

4. If the tubing is not yet fully primed, press **Y** and repeat step 3.

When the tubing is fully primed, press **N** to exit priming.

Prime Tubing?

Press Y or N

Prime Tubing?

Press Y or N

Disconnect tubing
from patient
Open clamps
Hold Y to prime

Priming...
0.1 ml

Hold Y to prime

Continue Priming?

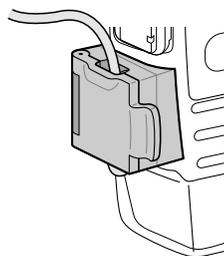
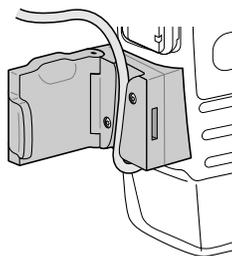
Press Y or N

5. If an air detector is in use, open the air detector door and thread the tubing through the groove.

WARNING: When the air detector is not installed, or is installed but turned off, the pump will not detect air in the fluid path. It is recommended that you periodically inspect the fluid path and remove any air to prevent air embolism.

6. Close the door, making sure the tubing does not get pinched or kinked.
7. Connect to the patient's infusion set or indwelling catheter.

WARNING: Ensure that the entire fluid path is free of all air bubbles before connecting to the patient to prevent air embolism.

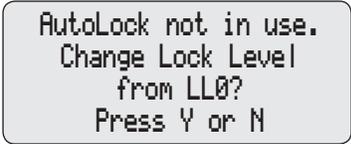


Setting the Lock Level for the Patient

The lock level must be reset to LL1 or LL2 to prevent the patient from having complete access to all programming and operating functions.

If AutoLock is not in use and the lock level is LL0 when you attach a cassette, this message will appear in the sequence of screens to allow you to set the lock level to LL1 or LL2.

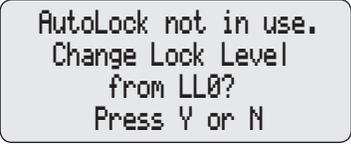
If AutoLock is in use, this screen will not appear; instead, the message "Start the Pump?" will appear (see the next section).



AutoLock not in use.
Change Lock Level
from LL0?
Press Y or N

To Change the Lock Level

1. With this message displayed, press **▲**.



AutoLock not in use.
Change Lock Level
from LL0?
Press Y or N

2. The current lock level (LL0) will appear.



Lock Level
LL0

3. Press **▲** or **▼** until the desired lock level (LL1 or LL2) appears.



Lock Level
LL1

4. Press **LOCK**. 000 will appear.



Lock Level Code
000

5. Press **▲** or **▼** until the lock level code appears. (See the Operator's Manual for the lock level code.)



Lock Level Code
XXX

6. Press **LOCK** to set the new lock level. Watch the display to verify that the correct lock level is being entered.



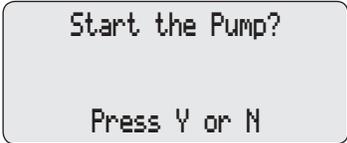
Lock Level
LL1
<Changing...>

Starting the Pump

1. This is the last screen to appear when you attach a cassette. If the fluid path is free of air and the set is attached to the patient, press **▲** to start the pump.
2. "Starting Pump..." will appear.

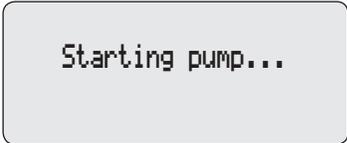
The pump will review the program, lock level, AutoLock setting, time, and date. If AutoLock is in use, AutoLock is changing lock level to (LL1 or LL2) will appear.

After the automatic review, "RUNNING" will appear on the main screen, the green indicator light will blink, and fluid delivery will begin as programmed.



Start the Pump?

Press Y or N



Starting pump...

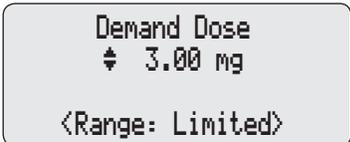
Adjusting Doses in Lock Level 1

If the pump is in lock level 1, the continuous rate and demand dose values can be increased up to the value that was programmed in LL0.

If it becomes necessary to increase the continuous rate or demand dose during the course of therapy, stop the pump but remain in LL1. Then do the following.

To Adjust the Rate or Dose while the Pump is in Use

1. Stop the pump. Remain in LL1.
2. Press **◀NEXT** until the continuous rate or demand dose screen appears.
3. Press **▲** or **▼** to select the desired value, then press **◀ENTER**. "Range: Limited" indicates you cannot increase the value beyond the maximum programmed in LL0.
4. Restart the pump if appropriate.



Demand Dose
⬆ 3.00 mg

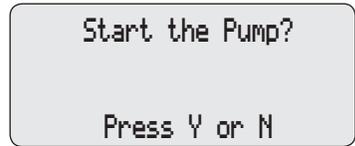
<Range: Limited>

Starting the Pump

Starting the pump starts delivery. When you start the pump, programmed values will be automatically reviewed. Then fluid delivery will begin as programmed, “RUNNING” will appear on the main screen, and the green indicator light will blink.

To Start the Pump

1. Press  “Start the Pump?” will appear.

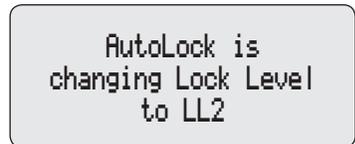


2. Press  “Starting Pump...” will appear.



The pump will review the program, lock level, AutoLock setting, air detector status, time, and date.

If AutoLock is in use, “AutoLock is changing lock level to [LL1 or LL2]” will appear.



Stopping the Pump

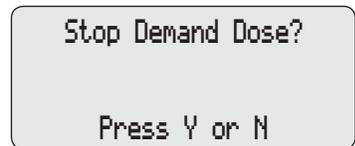
Stopping the pump stops delivery. “STOPPED” will appear on the main screen and the amber indicator light will blink.

To Stop the Pump

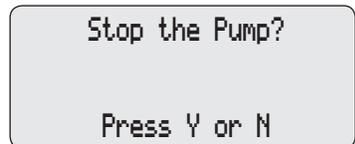
1. Press .

If a demand dose or clinician bolus is in progress, “Stop Demand Dose?” or “Stop Clinician Bolus?” will appear.

Press  to stop the dose.



2. When “Stop the Pump?” appears, press .



Starting a Clinician Bolus

To Start a Clinician Bolus

1. Make sure the pump is running (in any lock level). Start the pump if necessary.
2. Press **LOCK**.
3. Press **N** until the clinician bolus code appears on the display. See the Operator's Manual.

WARNING: To prevent the patient from accessing the clinician bolus function, do not let the patient know the clinician bolus code.

Clinician Bolus Code
XXX

4. Press **LOCK** again.
5. Press **Y** or **N** to select the desired amount.
6. Press **ENTER** or **DOSE**.

NOTE: If you enter a value of 100 or greater, a screen will appear asking you to confirm the value. Press **Y** to confirm, or **N** to re-enter the value.

Clinician Bolus
± 10.00 mg

Range <0 - 20.0>

7. The screen will show the amount decreasing as the bolus is delivered.

Clinician Bolus
10.0 mg

<Delivering...>

Starting a Demand Dose

If a demand dose has been programmed, the patient may start a demand dose while the pump is running. If no demand dose has been programmed, the pump will display the message “Dose not delivered, No Dose programmed.”

To Start a Demand Dose

1. Make sure the pump is running (in any lock level). Start the pump if necessary.
2. Press  (or the button on the remote dose cord, if attached). Two beeps will sound and the pump will begin delivering the demand dose. As the demand dose is delivered, the main screen will show “DOSING” in place of “RUNNING.”

```
Demand Dose
Started

NEXT to continue
```

```
*** PCA 6210X ***
Low Battery   DOSING
Res Vol      47.0 ml
Press NEXT to advance
```

Stopping a Clinician Bolus or a Demand Dose

To Stop a Demand Dose

1. Press .
If a demand dose or clinician bolus is in progress, “Stop Demand Dose?” or “Stop Clinician Bolus?” will appear.
2. Press  to stop the dose and to cancel the remainder of the dose. “Demand Dose Stopped” or “Clinician Bolus Stopped” will appear.
3. When “Stop the Pump?” appears,
 - press  to keep the pump running, or
 - press  to stop the pump.

```
Stop Demand Dose?

Press Y or N
```

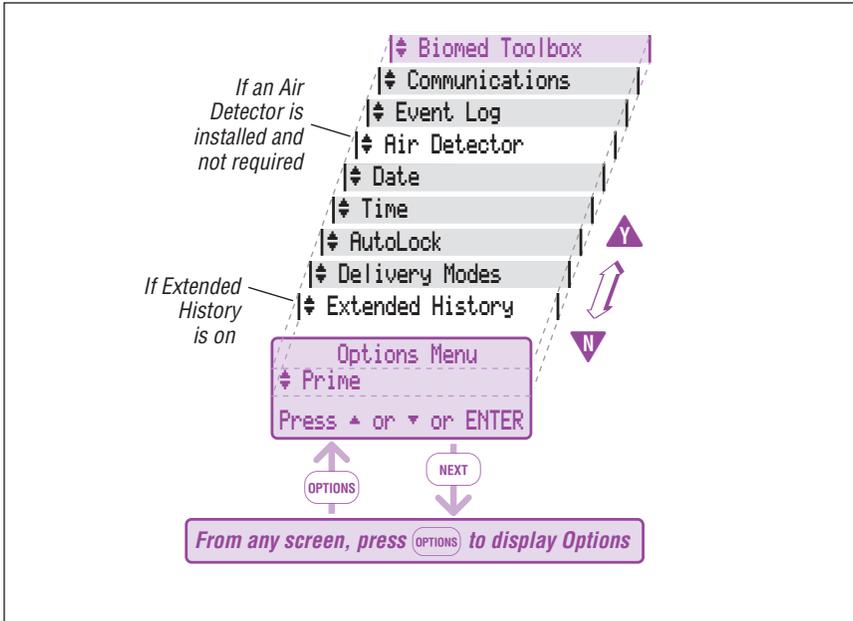
```
Demand Dose
Stopped
```

```
Stop the Pump?

Press Y or N
```

Options

The Options menu allows access to other pump features and settings. The availability of an option may depend on the pump's lock level, biomed toolbox settings, the presence of an air detector, and whether the pump is running or stopped. (See the Operator's Manual for more detailed information. For more information about the Communications option, refer to the product literature supplied with the CADD-DIPLOMAT® telecommunications system.)



To Access Options

1. Start at any screen and press **OPTIONS**.
2. Use **▲**, **▼** or **OPTIONS** to page through the Options.
3. To change an Option's setting, make sure it is displayed on the Options menu and press **ENTER**. Press **▲** or **▼** to select the desired setting. Then press **ENTER** to save it.
4. To exit the Options menu, press **NEXT** until you return to the main screen.

Prime

Priming can be accessed in two ways: 1) when you attach a cassette, or 2) through the Options menu. The pump must be stopped and in lock level 0 or lock level 1.

To prime, select prime from the Options menu. Then follow the steps on page 16, beginning with step 2.

Extended History, Viewing

The extended history only appears if it has been turned on in the biomed toolbox. The pump may be running or stopped and in any lock level. It allows you to view the following dose information on the display:

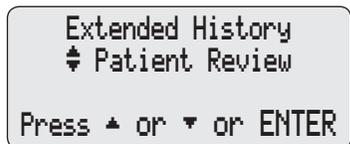
- Patient Review gives a summary of the pump's current settings and the number of doses given and attempted starting at a date and time you specify.
- Doses Hour by Hour allows you to page back through summaries for each one hour period and shows the number of doses given and attempted.

Both views show dose information for the past 48 hours, unless a new patient marker has been added, or the units, time, or date have been changed. Dose information previous to any of these events will not appear.

To View the Extended History

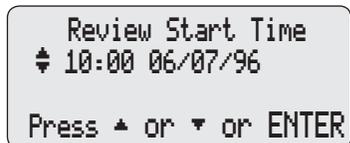
Once you have selected the Extended History option:

1. Press **▲** or **▼** to select "Patient Review" or "Doses Hour by Hour," then press **ENTER**.



Extended History
◆ Patient Review
Press ▲ or ▼ or ENTER

If you have selected "Patient Review," press **▲** or **▼** to select the start time and date. All start times begin on the hour. Then press **ENTER**.



Review Start Time
◆ 10:00 06/07/96
Press ▲ or ▼ or ENTER

2. Use **▲** to page forward through the screens and **▼** to page backward.
3. When finished, press **NEXT** to return to the extended history screen.

AutoLock

The AutoLock option automatically changes the lock level from LL0 to LL1 or LL2 when the pump is started, instead of requiring you to manually change the lock level before giving the pump to the patient. AutoLock may be set to LL1, LL2, or Not In Use.

Time

The Time option shows the time of day in 24-hour (military) time according to the pump's internal clock. The clock is powered by a separate, internal battery which retains the time even when the 9 volt battery is removed. The time is used to record the time of events in the event log.

Date

The Date option should reflect the current date. This feature is used to record the date of events in the event log.

Air Detector On/Off

The Air Detector option controls whether the air detector is turned on or off. This option appears in the menu only if an air detector is installed on the pump and is not required. (A setting in the biomed toolbox controls whether an air detector is required. If the air detector is required, you are not allowed to turn it off and this option will not appear in the menu.)

WARNING: When the air detector is not installed, or is installed but turned off, the pump will not detect air in the fluid path. It is recommended that you periodically inspect the fluid path and remove any air to prevent air embolism.

When the air detector is first attached to the pump, the air detector screen defaults to "Turned On." This screen also changes to "Turned On" each time the pump powers up in lock level 0.

To view the setting, the pump may be in any lock level. To change the setting, the pump must be stopped and in LL0.

Event Log, Viewing

The event log records the following types of events: dose delivery, alarms, errors, power source changes, cassette changes, changes to pump programming or settings. The pump records the date and time of each event, and lists events in order starting from the most recent through the last 500 events.

The pump may be running or stopped and in any lock level to view the event log.

Power Pack or AC Adapter

You can attach an alternate source of power to the pump, such as the CADD® External Power Source (EPS) system power pack (reorder number 21-3801) or AC adapter. The pump must also contain a functional 9 volt battery as a backup. Otherwise, the pump will not start.

Before using the power pack, refer to the CADD® External Power Source (EPS) system Instructions for Use supplied with the power pack for instructions on equipment setup, system operation, specifications, and warnings.

CAUTIONS:

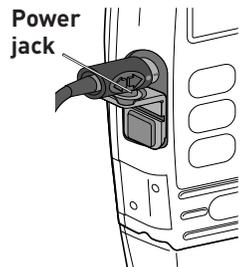
- Do not use the battery adapter supplied with the EPS system. Although the battery adapter is used with other CADD® pumps, the CADD-Prizm® pump's battery compartment is not designed to hold the battery adapter. A 9 volt battery must be installed instead.
- Do not allow the power pack to hang from a pump mounted on an IV pole. This may result in damage to the power pack.

To Attach the Power Pack or AC Adapter

1. Open the cover for the power jack.
2. Line up the red mark on the power pack or AC adapter connector with the red mark on the pump. Push the connector in until it clicks.

NOTE: The connector may or may not be supplied with the grip shown in this illustration.

3. If using an AC adapter, plug the other end into a 3-pronged wall outlet.



To Detach the Power Pack or AC Adapter

CAUTION: To avoid damaging the connector or cable, do not use excessive force or instruments such as pliers to remove the connector from the pump.

1. Grasp the collar on the connector
2. Pull the connector back using a straight, steady motion. DO NOT twist or turn the connector.

Attaching the Remote Dose Cord

The patient may start a demand dose by pressing either the remote dose cord button or the dose key.

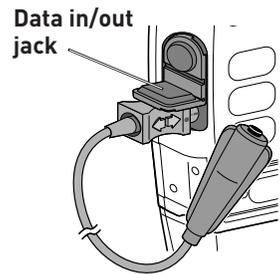
CAUTIONS:

- *Do not place the remote dose cord where the button might accidentally be pushed. Accidentally pushing the button would deliver an inadvertent demand dose.*
- *Do not use the remote dose cord to pick up or carry the pump. Using the cord in this manner could damage the pump or cord.*
- *To avoid damaging the connector or cord, do not use excessive force or instruments, such as pliers, to remove the remote dose cord from the pump.*

To Attach the Remote Dose Cord

1. Open the data in/out cover.
2. Line up the red mark on the remote dose cord connector with the red mark on the pump. Push the connector in until it clicks.

NOTE: The cord may or may not be supplied with the grip shown in this illustration.



Detaching the Remote Dose Cord

To Detach the Remote Dose Cord

1. Grasp the collar on the connector.
2. Pull the connector back using a straight, steady motion. DO NOT twist or turn the connector.

Using the Security Shell

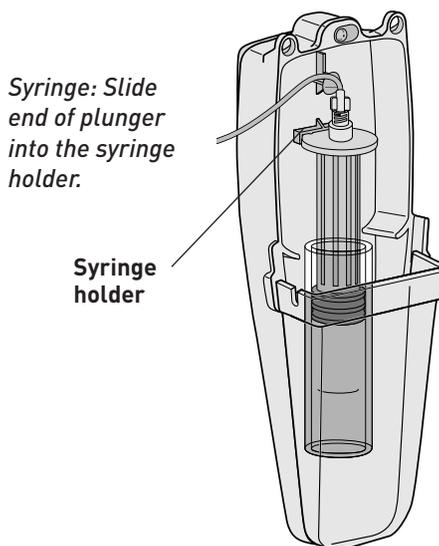
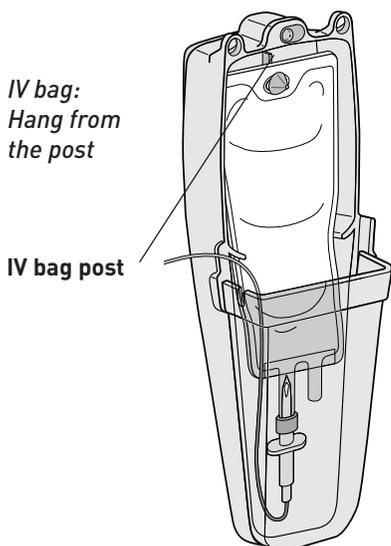
The security shell helps prevent access to the medication. The security shell encloses the IV bag or sterile vial with injector (syringe) and locks the pump in such a way that the medication reservoir is inaccessible, but the pump keypad, battery compartment, and jacks are accessible.

Follow the instructions on page 14 for attaching the administration set to the pump before installing the components into the security shell.

WARNING:

- *If the security shell is dropped, immediately stop the pump and remove it from the security shell. Make sure there is no damage to any of the components, and that the IV bag or syringe is installed properly. Damage to the IV bag or syringe could result in upstream occlusion, nondelivery of drug, and/or air embolism, which could cause death or serious injury to the patient.*
- *Use of a syringe with the CADD® administration set may result in UNDER-DELIVERY of medication. Syringe function can be adversely affected by variations in plunger dimension and lubricity, which can result in greater force required to move the syringe plunger. A syringe plunger will lose lubrication as it ages and, as a result, the amount of under-delivery will increase which could on occasion, be significant. Therefore, the type of medication and delivery accuracy required must be considered when using a syringe with the CADD® pump.*
- *Clinicians must regularly compare the volume remaining in the syringe to the pump's displayed values such as RES VOL and GIVEN in order to determine whether under-delivery of medication is occurring and if necessary, take appropriate action.*

Installing the Fluid Bag or Syringe and Pump

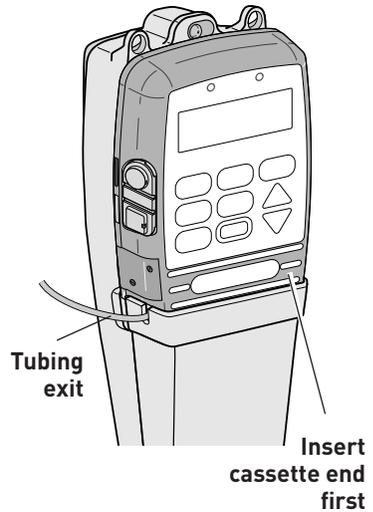


1. If you are using an IV bag, hang the bag from the post inside the security shell; or,

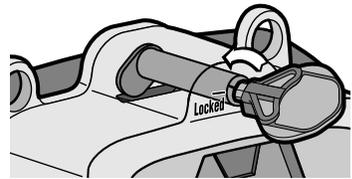
If you are using a syringe, slide the end of the plunger into the syringe holder inside the security shell.

2. Fit the pump onto the security shell, cassette end first. Make sure the tubing leading from the IV bag or syringe to the pump fits completely inside the security shell.

CAUTION: Do not pinch the tubing between the pump and security shell; this may result in an alarm and/or nondelivery of fluid.



3. Hold the pump firmly against the security shell. Insert the key into the lock on the back of the security shell and turn it counterclockwise until the black mark lines up with "Locked." Make sure the pump is firmly locked into place.



Removing the Pump and the Fluid Bag or Syringe

1. Insert the key into the lock. Turn the key clockwise until the pump unlocks from the security shell.
2. Remove the pump and the fluid bag or syringe.

Using the Lockable Polemount Bracket

For use with the CADD-Prizm® pump or the security shell

The lockable polemount bracket allows you to lock a CADD-Prizm® pump onto an IV pole. It is designed to attach directly to the back of a CADD-Prizm® pump or a CADD-Prizm® pump security shell or lockbox. Using a CADD® key, you can lock the bracket in place so that neither the pump nor the polemount bracket can be removed from the IV pole.

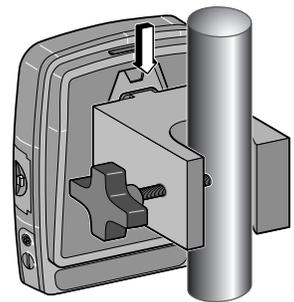
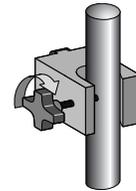
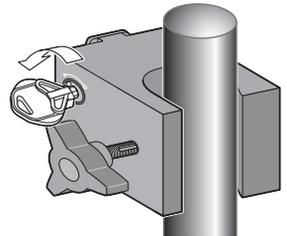
CAUTION: If you use the EPS System power pack with a pump mounted on an IV pole, do not allow the power pack to hang from the pump's connector. This could result in damage to the power pack or pump connector.

If you wish to use an external source of power with the CADD-Prizm® pump while it is mounted on an IV pole, it is recommended that you use the AC adapter without the power pack.

To Attach the Pump, Security Shell, or Lockbox to a Pole Using the Polemount Bracket

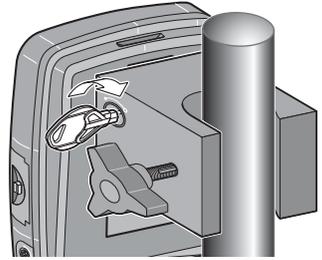
NOTE: If you are using a security shell, you may first mount the security shell to the polemount bracket following these instructions, then install the pump and IV bag or sterile vial with injector (syringe) into the security shell.

1. Place the polemount bracket around the IV pole at the desired height. Clamp the bracket firmly to the pole by turning the knob clockwise.
2. Insert the key into the lock and turn it counterclockwise until the mark on the lock lines up with the solid (“locked”) dot on the polemount bracket.
3. Turn the knob either direction until it clicks; this engages the lock. When the polemount bracket is locked, neither the knob nor the release button is operable.
4. Match the tabs on the polemount bracket with the notches on the back of the CADD-Prizm® pump or security shell.
5. Slide the pump or security shell downward until you hear it click into place.

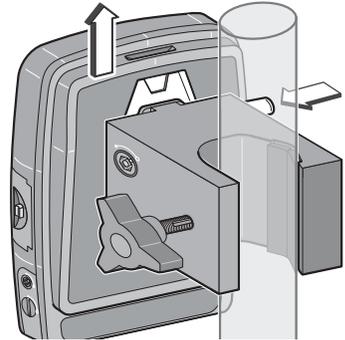


To Remove the Pump, Security Shell or Lockbox from the Polemount Bracket

1. Insert the key into the lock and turn it clockwise until the mark on the lock lines up with the open ("unlocked") dot on the polemount bracket.



2. Push in and hold the black release button on the side of the polemount bracket.
3. Lift the pump or security shell off of the bracket.



Alarms and Messages, Alphabetical List

A more detailed list of alarm messages is included in the Operator's Manual.

<i>Message on Pump Display</i>	<i>Corrective Action</i>
9 volt battery depleted	Install a fresh 9 volt battery. The pump will not start with a depleted 9 volt battery. A good battery must always be installed even when an external source of power is connected. Remove and reinstall the battery to cancel this message, then restart the pump if necessary.
9 volt battery low	The 9 volt battery is low but the pump is operable. Change the 9 volt battery soon. NOTE: This message may appear when you install a fresh battery while an external source of power is connected. Remove and reinstall the battery to cancel this message.
Air detector being set to turned on	The air detector has been installed and is being automatically activated. Use Options if you wish to turn off the air detector.
Air in line detected / pump will not run	The air detector has detected air in the fluid path; the fluid path may contain air bubbles, or the tubing may not be threaded through the air detector. Press NEXT to silence the alarm, then: <ul style="list-style-type: none"> • Make sure the tubing is threaded properly. • If the fluid path contains air bubbles, close the clamps and disconnect the fluid path from the patient. Then follow the instructions for removing air using the Prime option.
AutoLock is changing lock level to (LL1 or LL2)	No action is necessary; the AutoLock feature is automatically changing the pump's lock level to the level shown.

<i>Message on Pump Display</i>	<i>Corrective Action</i>
Cassette not attached / pump will not run	The pump will not start without a cassette attached. Make sure a cassette is attached properly. Then start the pump.
Cassette unlocked	The cassette must be locked onto the pump before the pump can be started. If an alarm is sounding, press NEXT to silence the alarm. Lock the cassette, then start the pump.
<Custom>	On a programming screen, this indicates that available settings have been customized. On a screen in which a code is entered, this message indicates the pump's lock level code has been customized.
Error detected / E (code)	A pump fault has occurred. Close the tubing clamp and remove the pump from use. Contact Customer Service to return the pump for service.
High pressure	The pump has detected high pressure, which may be resulting from a downstream blockage, kink in the fluid path, or a closed tubing clamp. Remove the obstruction to resume operation. Or, press STOP START to stop the pump and silence the alarm for 2 minutes, then remove the obstruction and restart the pump.
Power pack depleted / change power source	The power pack is depleted and unable to support pump operation. The 9 volt battery is supplying power. Recharge the power pack with the AC adapter.
Prev. maint. reminder (date)	Your institution may have established a maintenance program for the pump, and the pump is due for preventive maintenance. Refer to your institution's policy.

<i>Message on Pump Display</i>	<i>Corrective Action</i>
Range: limited	This message appears on rate, dose, or reservoir volume screens when the pump is in LL1. It indicates that the range of programmable values is limited by the value programmed in LL0. (i.e. you cannot increase the value beyond what was programmed in LL0).
Reservoir volume is zero	The reservoir volume has reached 0.0 mL. Press NEXT to stop the alarm. Then install a new reservoir if appropriate.
Reservoir volume low	The reservoir volume value is low, indicating that the level of fluid in the reservoir is low. Prepare to install a new reservoir.
Upstream occlusion (Model 6101 only)	Fluid is not flowing from the reservoir to the pump. Check for a kink, a closed clamp or an air bubble in the tubing between reservoir and pump. Press STOP START to stop the pump and silence the alarm for two minutes, then remove the obstruction and press NEXT to restart the pump.
Wrong cassette	The pump detects the cassette is damaged, attached improperly, or incompatible with the pump. Close the tubing clamp. Make sure the cassette is attached properly. Then open the clamp and restart the pump. If the alarm persists, you may need to replace the cassette.

THE DETAILS GIVEN IN THIS LEAFLET ARE CORRECT AT THE TIME OF GOING TO PRESS. THE COMPANY RESERVES THE RIGHT TO IMPROVE THE EQUIPMENT SHOWN.

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