

CURLIN MEDICAL

Holding the Line on Infusion Cost!

Patient Guide

AMBULATORY INFUSION SYSTEMS

PainSmart™, 4000 Series™ and 2000 Series™



Table of Contents

Introduction	3
Preparing Your Therapy	3
Installation of Administration Set	4
Removal of Administration Set	4
Priming the Administration Set	5
Starting the Pump	5
Power	6
Opening and Closing the Pump Door	6
Alarms	7
Alarms Conditions and How to Resolve Them	7
Frequently Asked Questions	8
Notes	10



This guide is intended as a reference only.
For detailed instructions, contact your healthcare clinician.

© 2001– 2005 Curlin Medical, LLC. All rights reserved. 06/05

Introduction

Your physician has prescribed the *Curlin Medical* ambulatory infusion pump to assist in delivering your medical treatment.

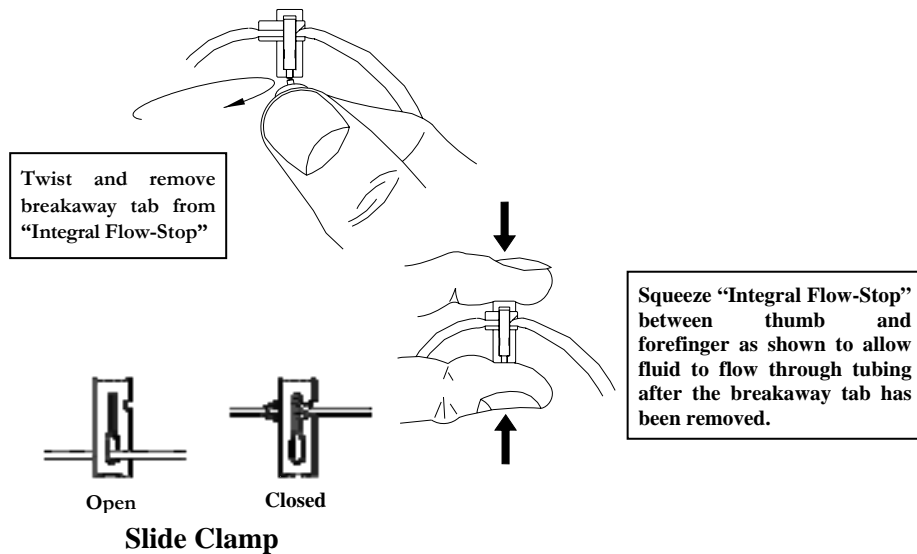
Your healthcare clinician will program the pump specifically for your therapy and teach you how to use the pump in your treatment. The information in this guide will help you learn how to use the pump. If you have questions, ask your clinician to explain the pump's operation so that you understand it completely.

Preparing Your Therapy

Your clinician will teach you how to prepare your medication and how to attach the administration set. The basic steps are demonstrated below.

- 1 Remove the administration set from the package.
- 2 Twist the break-away tab off the yellow "Flow-Stop".
- 3 Follow your clinician's instructions for inserting the bag spike into the IV bag so that it is not contaminated.
- 4 Gravity prime (remove air) from the IV bag and the administration set by squeezing the "Flow-Stop" between your thumb and forefinger until air is removed and the tubing is filled with fluid. Release the "Flow-Stop" and close the slide clamp on the set.
- 5 Follow the instructions on page 4 for installing the set into the pump.
- 6 Close the door of the pump all the way, and latch the door securely.

Note: If a Check Valve Adapter is provided with your administration set, remove it from the package and connect it to the distal end of the set.



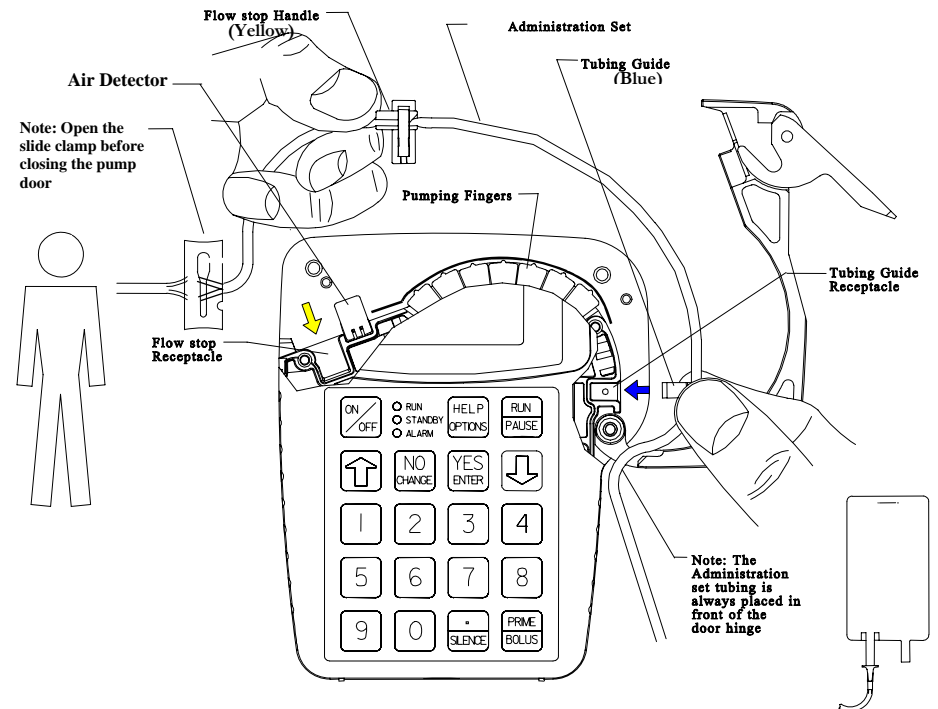
Installation of Administration Set

- 1 To open the door of the pump, lift the latch on the top of the door and pull the door up and all the way to the right (refer to diagram below).
- 2 Place the blue "Tubing Guide" completely into the tubing guide receptacle. (This receptacle is indicated by a blue arrow.) **CAUTION:** The tubing should be placed IN FRONT of the door hinge.
- 3 Lay the tubing over the yellow dot in the center of the gray pumping section and insert the "Flow-Stop" into its receptacle (indicated by a yellow arrow.) **Caution: do not press the top of the "Flow-Stop", as this will allow fluid to flow through the set.**
- 4 Gently press the tubing into the black air detector slot.
- 5 If the slide clamp is closed, open it before closing the pump door.
- 6 Close the door of the pump by firmly pushing down the door and securing the latch.

Important Notification: Please center the tubing in the pumping area when installing the administration set. A lack of compliance with proper positioning of the tubing could result in infusion inaccuracies.

Removal of Administration Set

- 1 Open the pump door and remove the blue "Tubing Guide" from its receptacle.
- 2 Pull tubing toward the "Flow-Stop" and disengage the "Flow-Stop" from its receptacle.
- 3 Dispose of the used IV administration set as directed by your healthcare provider.



Priming the Administration Set

The air can be removed from your administration set as shown previously by "gravity priming" the administration set. Air can also be removed by utilizing the PRIME function of the pump.

CAUTION: Be sure the administration set is disconnected from your IV site before priming. Priming with the set connected to the IV site could result in overdose and may cause injury or death.

- 1 Press and release the **PRIME** key from Run Options Menu.
- 2 Release any clamps on the administration set.
- 3 Press and hold the **PRIME** key until priming is complete.
- 4 When all the air is removed from the IV bag and the administration set, release the **PRIME** key and press the **YES/ENTER** key to exit prime.
- 5 Connect the administration set to your IV site and then press the **RUN** key to begin your infusion.

Note: If you use alcohol to cleanse your access device, let the alcohol dry completely before connecting the administration set.

Starting the Pump

- 1 Turn the pump on by pressing the blue **ON/OFF** key. The pump will perform a self-test, and then will beep three times.
- 2 After passing the self test, the screen will display the remaining battery life or the external power source.
- 3 Next, a screen with PROGRAM, BIOMED SETUP options will be displayed. The cursor (gray bar) will be on PROGRAM. Select PROGRAM by pressing the **YES/ENTER** key.
- 4 The screen will change. The cursor will be on RESUME, REPEAT Rx, or NEW PROGRAM. Move the cursor to the proper selection and press the **YES/ENTER** key. (Note: If your clinician has programmed a delayed start, select RESUME, skip step 5 and 6, go directly to step 7).
- 5 If you select REPEAT Rx and your pump has more than one programmed therapy, a screen will display the therapy choices. Select which therapy to repeat at this time by using the arrow keys to place the cursor on the desired therapy and then press the **YES/ENTER** key. NOTE: If your pump is programmed for a single therapy, the screen will go directly to that therapy's programmed prescription screens.
- 6 Your preprogrammed prescription values will appear in the next two display screens for your review. The display screen pump will scroll automatically. To halt the automatic review, press any key (except ON/OFF), then complete the prescription review by pressing the **YES/ENTER** key at each successive field. The RUN OPTIONS menu will now appear on the screen.
- 7 If there is no air in the IV bag or tubing, connect the new administration set to your IV site. Press the **RUN** key to start your infusion. (If there is air in the line, refer to the priming section.)

Power

Curlin Medical pumps can be powered by:

- 1 Two "C" size **ALKALINE** batteries, installed in the compartment on the back of the pump,
- 2 A rechargeable Battery Pack, or
- 3 An AC Adapter.

Low Battery Alert

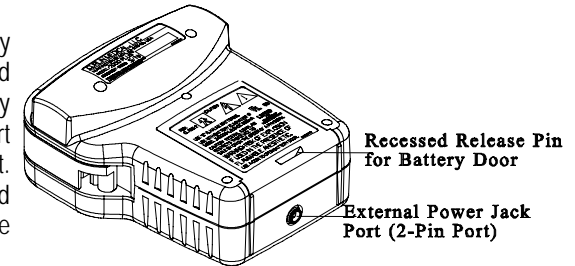
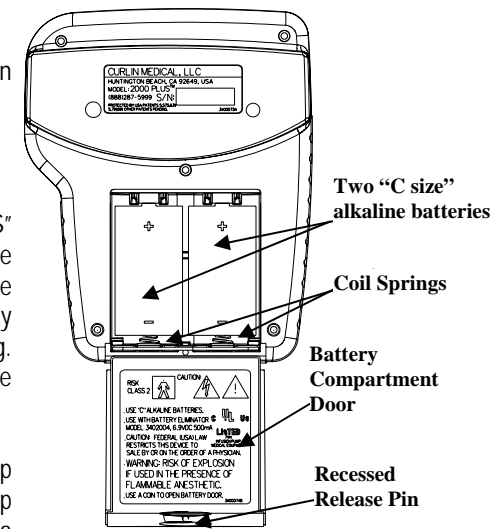
A beep will sound and a "Low C-BATTERIES" alert will display when the power in the batteries/battery pack is low. Depending on the therapy infusion rate, you will have approximately 30 minutes to 4 hours of battery time remaining. When this alert occurs, replace batteries or the Battery Pack.

Changing Power Sources

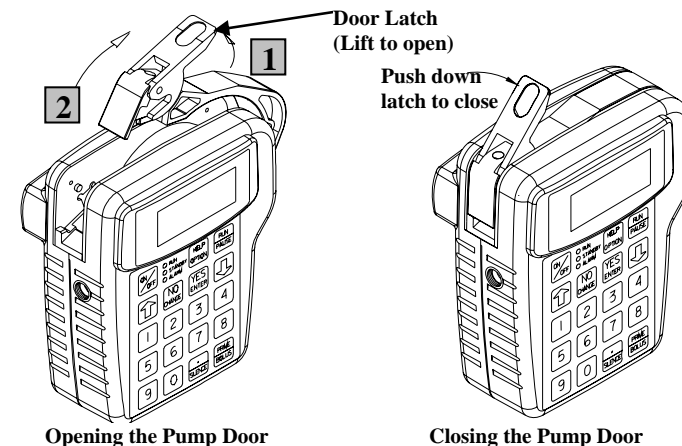
To replace the "C" size batteries, turn the pump OFF or connect the AC adaptor. Hold the pump so that the back of the pump is facing you. Push a coin into the slot at the bottom of the battery cover and pull in a downward direction. Replace batteries with both positive (+) poles at the top of the battery compartment.

Attaching the External Power Source

To attach the AC adapter or the Battery Pack, in 2000/4000 Series, align the red dot/notch on the plug of the accessory with the red dot/notch of the power port on the bottom of the pump and insert. PainSmart pumps have a uniquely keyed power jack. To remove, pull back on the locking sleeve and remove.



Opening and Closing the Pump Door



Opening the Pump Door

Closing the Pump Door

Alarms

When an alarm sounds you will hear a beep(s), the red alarm light will flash and the data screen will display the reason or the alarm. To resolve alarm situations refer to the alarm chart below.

To silence the alarm, press the **SILENCE** button. This will silence the alarm for one minute.

Alarm Conditions and How to Resolve Them

LCD DISPLAY	CONDITIONS	RESOLUTION
INFUSION COMPLETE	Programmed amount to be infused has been reached (is "0").	Press "PAUSE", add another IV bag if indicated and select "Repeat" function to continue the therapy; or, turn the pump Off by pressing the "PAUSE" key, then "OFF" key.
ALARM AIR-IN-LINE	The pump has detected air in the administration set.	Remove air from the administration set per your clinician's instructions for priming.
ALARM DOWN OCCLUSION	The pump has detected an occlusion between the pump and your access site.	Check the tubing from the pump to your IV site. Un-kink the tubing or open the clamp if it's closed. When the occlusion is resolved, the pump will automatically restart the infusion. If the alarm continues, notify your clinician.
ALARM UP OCCLUSION	The pump has detected an occlusion between the IV bag and the pump.	Press PAUSE key, check administration set from the IV bag to the pump. Un-kink the tubing or remove any clamps. When problem is resolved, select "Resume" to resume your therapy. If this alarm continues, notify your clinician.
ALARM HIGH UP PRESSURE	The pump has detected pressure on the IV bag.	Press PAUSE key, check for excessive pressure in the IV bag, and relieve it. To begin infusion, select "Resume".
ALARM SET NOT INSTALLED	The administration set has not been installed or has been installed improperly.	Install the administration set as directed by your clinician, check that all procedures are followed correctly.
ALARM UNATTENDED PUMP	When a therapy is in progress and the pump is paused for more than two minutes, this alarm will occur.	To resolve, press RUN/PAUSE key and resume the therapy or continue with operating procedure.

LCD DISPLAY	CONDITIONS	RESOLUTION
ALARM REPLACE SET	The pump has detected that the administration set must be replaced.	Replace the administration set following all your clinicians instructions for this procedure.
ALARM DOOR OPEN OR SET NOT PROPERLY INSTALLED	Pump door is open or "Tubing Guide" not correctly inserted.	Check placement of the "Tubing Guide" and close the pump door properly.
ALARM EMPTY BATTERY	The batteries no longer have sufficient power to run the pump. If the battery pack is being used, both it and the "C-Cell" batteries are depleted.	Replace both of the "C-Cell" batteries. Recharge or replace the battery pack if applicable.
ERROR CODE	The pump has detected an error.	If an error code occurs, turn pump off then back on. If it reoccurs, notify your clinician.

Frequently Asked Questions

What should I do if I have questions about the pump? Whenever you have questions about the pump or your therapy, you should call your healthcare provider.

How do I move around with the pump? Curlin Medical pumps have a carry pack specifically designed to allow you to be mobile and active while receiving your therapy. Your healthcare provider will demonstrate how to use the carry pack.

Where do I leave the pump when I want to sleep? Place the pump at your bedside or next to you on the bed. Your clinician may have special instructions for bedtime use of the pump.

How do I bathe or shower during my therapy? The pump is water resistant, but not water proof, so it should be placed outside your tub or shower.

How do I exit the help screen? When the pump is paused and the help/option key is pressed, a help message will appear. Press the help/options key again to exit the help screen.

Where does the remote "Bolus Cable" (with a green ring) plug into on the pump? The port on the side of the pump (labeled BOLUS/DATA in 2000 and 4000 Series) is for the remote "Bolus Cable" with switch.

Where does the "Data Interface Cable" (green ring at one end, serial port connector at the other end) plug into on the pump? The port on the side of the pump (labeled BOLUS/DATA in 2000 and 4000 Series) is for the "Data Interface Cable".

How do I remove the "AC Adapter/Charger", the "Bolus Cable" or the "Data Interface Cable" from the pump? Pull on the ring (blue for the "AC Adapter/Charger", green for the "Bolus Cable" and "Data Interface Cable") and the cord will be released from the pump.

Approximately how long will new batteries last? Battery life depends on the usage. The following times are approximate only:

- Nominal 85 hours at a rate of 2 ml/hr
- Nominal 30 hours at a rate of 125 ml/hr
- Nominal 10 hours at a rate of 400 ml/hr.

However, if the patient is frequently pressing keys, that action will illuminate the display and the battery life will be shortened. To extend battery life, the AC Adapter may be used at night.

How can I determine how much battery power is remaining in the pump?

- Read the power bar graph when you first turn on the pump.
- Use the options menu and select "PWR CK" to view the power bar graph while the pump is running.

Are the C-cell batteries in the pump rechargeable? No. A rechargeable external battery pack and an Adapter/charger are, however, available for use with the pump.

Where does the "External Battery Pack" or "AC Adapter/Charger" (with a blue ring) plug into the pump? The port on the bottom of the pump (labeled POWER in 2000 and 4000 Series) is for the External Battery Pack and/or AC Adapter.

How long should the "External Battery Pack" be charged prior to use? The "External Battery Pack" should be charged initially for 24 hours using the "AC Adapter/Charger".

Does the subsequent charging time for the "External Battery Pack" need to be as long as the initial charge period? It is recommended that the "External Battery Pack" be charged for at least 8 hours prior to each subsequent use. The "AC Adapter/Charger" can be plugged into the "External Battery Pack" while the "External Battery Pack" is plugged into the pump. This allows the pump to be fully operational and provides a continuous charge to the "External Battery Pack".
