

# CURLIN MEDICAL

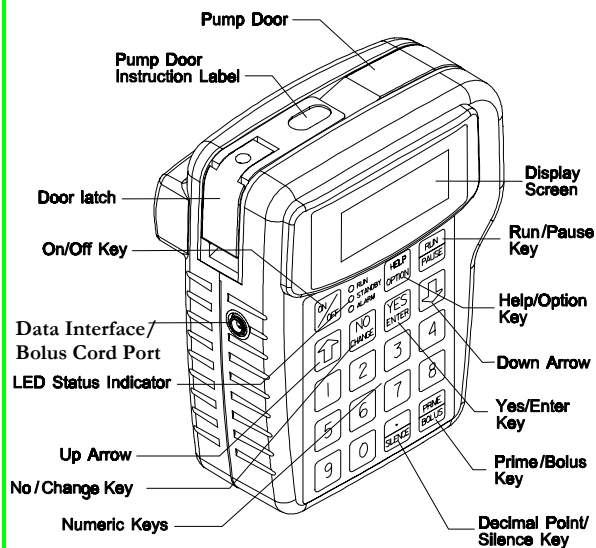
## 4000 Series™ and 2000 Series™ \*

### Ambulatory Infusion Pumps

## Clinician's Guide

# VARIABLE THERAPY

REFER TO USER'S MANUAL FOR DETAILED INSTRUCTIONS



### KEYPAD FUNCTION

**ON/OFF:** Turns pump on and off. When the pump is running, the PAUSE key must be used to stop infusion first. Then press the OFF key to turn pump off.

**RUN/PAUSE:** Starts or pauses the pump. When the pump is paused, pressing this key will resume pumping.

**UP ARROW/ DOWN ARROW:** Used to scroll through the display screens.

**NO/CHANGE:** Rejects highlighted data.

**YES/ ENTER:** Accepts highlighted data.

**HELP/OPTIONS:** Used to request and exit help screen when pump is paused, or go to options screen when pump is running.

**.SILENCE:** Used to silence alarm for 1 minute intervals, and as a decimal point.

**PRIME/BOLUS:** Used to prime fluid through the tubing to clear it of air.

### LED INDICATORS

**Green-** pump is running

**Yellow-** standby

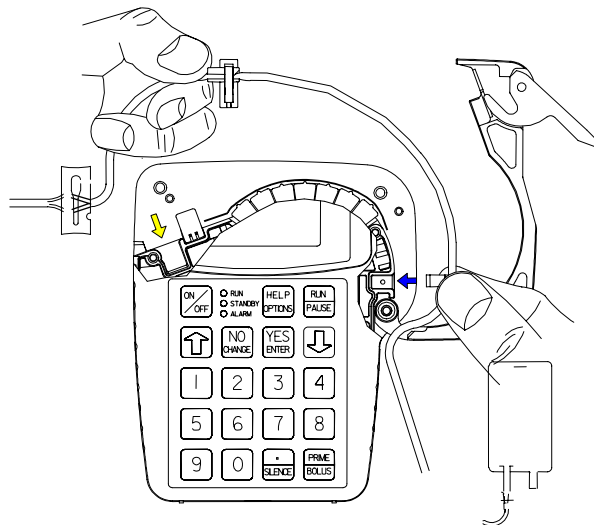
**Red-** pump in alarm status

### SETTING UP THE PUMP

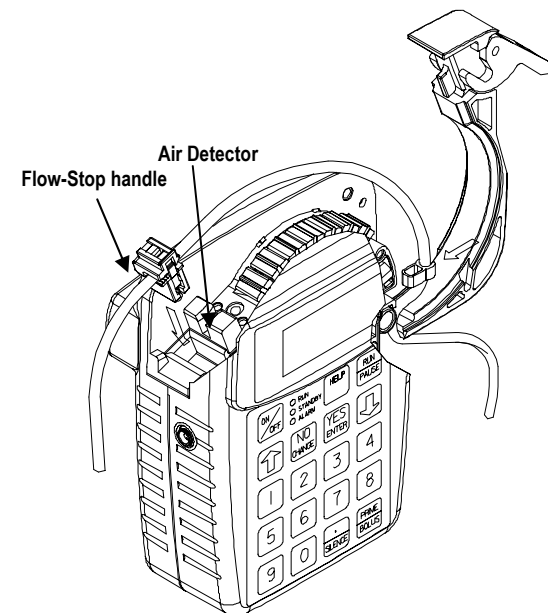
- 1 Install 2 new "C" size alkaline batteries or connect Battery Pack, or AC adapter to bottom of pump.
- 2 Prepare IV bag and attach a new administration set.
- 3 Eliminate all air from the bag and the administration set (see PRIMING THE SET).
- 4 Install set and close pump door.
- 5 Attach set to venous access device using agency protocol.

*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.

### INSTALLING THE ADMINISTRATION SET



- 1 Fully open the door of the pump.
- 2 Close the slide-clamp on the administration set.
- 3 Activate the Integral "Flow-Stop" by twisting and removing the breakaway tab.
- 4 Insert the blue tubing guide into the receptacle on right side of pump in the direction of the blue arrow, positioning the tubing in front of the door hinge.
- 5 **Center the tubing in the middle of the pumping fingers, covering the yellow dot.**
- 6 Holding the yellow Integral "Flow-Stop" by the handle, insert it on an angle into the receptacle on the left side of the pump in the direction of the yellow arrow. **CAUTION: Do not press down on the top of the Integral "Flow-Stop" when inserting it into the receptacle. This action could inadvertently open the Integral "Flow-Stop" and allow fluid to flow through the tubing.**
- 7 Open the slide-clamp on the administration set
- 8 Push the tubing slightly into the black Air Detector slot.
- 9 Fully close the door of the pump and latch it securely.



### Important Notification

A lack of compliance with proper positioning of the tubing could result in infusion inaccuracies.



Please center the tubing in the pumping area when installing the administration set.

### PRIMING THE SET

**CAUTION:** Disconnect set from patient's access site before priming.

#### By Gravity:

- 1 Twist and remove breakaway tab from "Flow- Stop".
- 2 Squeeze "Flow-Stop" between thumb and forefinger to allow fluid to flow through tubing.

#### Electronically:

*Note:* Set must be installed into the pump.

- 1 Release any clamps on the administration set.
- 2 Press and release PRIME key from "Run Options" menu
- 3 Press and hold the PRIME key until set is free of air; release key to stop (each prime cycle allows up to 6 ml of fluid).
- 4 When prime is complete, press YES/ENTER to exit the prime screen.

## PROGRAMMING FOR VARIABLE THERAPY

- 1 Turn the pump on.
- 2 Observe the self-test, the LED lights, and the power source screen.
- 3 Select PROGRAM from the first selection menu.
- 4 If multiple therapies are available, select VARIABLE from the therapy selection menu.

|                                      |   |   |
|--------------------------------------|---|---|
| UNITS: ml<br>DELAY: OFF<br>NEXT? YES | UNITS: mg<br>CONCEN: 0.0 mg/ml<br>DELAY: OFF<br>NEXT? YES | UNITS: mcg<br>CONCEN: 0.0 mcg/ml<br>DELAY: OFF<br>NEXT? YES |
|--------------------------------------|---|---|

- 5 Complete the pre-prescription menu:
- 6 Complete the prescription menu 1:

|  |
|--|
| BAG Vol: 0.0 ml<br>#DOSES: 0<br>K/RATE: 0.1 ml/hr<br>NEXT? YES |
|--|

- 7 Complete the other prescription menus (one dose per screen):

|   |  |   |
|---|--|---|
| DOSE: 1 of 24<br>AmtTBI: 0.0 ml<br>RATE: 0.0 ml/hr<br>TIME: 0:00 HH:MM<br>NEXT? YES | DOSE: 1 of 24<br>AmtTBI: 0.0 mg<br>RATE: 0.0 mg/hr<br>TIME: 0:00 HH:MM | DOSE: 1 of 24<br>AmtTBI: 0.0 mcg<br>RATE: 0.0 mcg/h<br>TIME: 0:00 HH:MM |
|---|--|---|

- 8 Press YES at each field to confirm data on Summary Screen:

|   |
|---|
| TOTDOSES: 24<br>TOTTime: 00:00 HH:MM<br>REQVol: 0.0 ml<br>DONE? YES |
|---|

- 9 Make selection from run option menu:

|   |
|---|
| ENTER to Select<br>RESUME<br>REPEAT RX<br>NEW PROGRAM |
|---|

- 10 Press NO to review prescription, OPTIONS to view options menu, PRIME to prime set, or press RUN key to start infusion.
- 11 While VARIABLE infusion is running, the display will alternate between various information screens.
- 12 To interrupt or pause an infusion, press RUN/PAUSE key.

|   |
|---|
| PRESS<br>RUN to START<br>NO to REVIEW<br>OPTIONS or PRIME |
|---|

- 13 Make selection from the pause menu:
- 14 When the infusion is complete, the following screen displays:

|   |
|---|
| INFUSION COMPLETE<br>.....<br>TOTVOL: 200.0 ml<br>K/RATE: 0.1 ml/hr |
|---|

- 15 To stop a therapy, press PAUSE then turn pump off.

## OPTIONS

- 1 **LOCK**: Press NO to change Lock Setting (may need access code). Press YES to accept new setting.
- 2 **HOURLY TOTAL \*\***: Press NO then YES to view. Scroll - to review. Press NO to exit.
- 3 **CLEAR HOURLY \*\***: Press NO then YES to view. Press YES to clear, NO to retain and exit.
- 4 **DOWN OCCLUSION**: Press NO to change, YES to accept.
- 5 **AIR SENSITIVITY**: Press NO to change, YES to accept.
- 6 **AUDIO**: Press 1-9 to hear level, press YES to accept.
- 7 **POWER CHECK**: Press NO then YES to check level.
- 8 **ACCEPT OPT?** Press YES to accept any changes made.

## HOW TO CHANGE THE LOCK SETTING

- 1 Lock may be initially selected in BIOMED SETUP.
- 2 When infusing, press OPTIONS key.
- 3 Scroll to LOCK and press NO to change.
- 4 Enter access code at prompt.
- 5 Select the appropriate Lock Setting.
- 6 Press YES/ENTER to select.
- 7 Exit Options menu by pressing YES at "ACCEPT OPT?" field.

## INSTALLING BATTERIES

- 1 Turn pump OFF or connect to AC adapter.
- 2 Open the battery door on the back of pump by depressing the release pin with a small coin and sliding it in a downward motion.
- 3 Install 2 new "C" size alkaline batteries with both positive poles at the top of the battery compartment
- 4 Slide the battery compartment door back into place.

## USING THE HELP FUNCTIONS

- 1 When programming, press the HELP key. While running, press PAUSE, then press HELP key.
- 2 When a HELP screen is displayed and there is more text to read that is not displayed on the screen, or icons will appear, scroll up and down the text using the ARROW keys.
- 3 When finished, press the HELP key again to exit the HELP screen.

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## PUMP ALARMS & RESOLUTIONS

| LCD DISPLAY             | RESOLUTION  |
|-------------------------|---|
| INFUSION COMPLETE       | Press PAUSE, add another IV bag, select REPEAT Rx and confirm fields, or turn the pump off.   |
| ALARM AIR-IN-LINE       | Remove air from administration set and IV bag. (Disconnect set from patient's access site prior to using prime function.)   |
| ALARM DOWN OCCLUSION    | Check administration set from the pump to patient's access site for cause of occlusion. Correct obstruction per protocol. Consider changing the pressure setting from Low to High. When occlusion is resolved, the alarm will stop and pumping will resume. |
| ALARM UP OCCLUSION      | Check administration set from IV bag to pump for cause of occlusion. When ready to begin infusion, press PAUSE, select RESUME, and press RUN.   |
| ALARM HIGH UP PRESSURE  | Check for excessive pressure on IV bag. When ready to begin infusion, press PAUSE, select RESUME, and press RUN.  |
| ALARM SET NOT INSTALLED | Install appropriate Curlin Medical administration set. Use ONLY Curlin Medical administration sets. See User's Manual or IV set directions for proper installation instructions.  |
| ALARM UNATTENDED PUMP   | To resolve, press RUN and resume the therapy or continue with operating procedure.  |
| ALARM REPLACE SET       | Replace set, prime set if necessary, select RESUME and press RUN when ready to begin.   |
| ALARM DOOR OPEN         | Check placement of administration set and close pump door properly. See User's Manual for instructions.   |
| ALARM EMPTY BATTERY     | Press the pause key and turn pump off. Install 2 new "C" size alkaline batteries.   |
| ERROR CODE              | If an error code occurs, turn pump off then back on. If it reoccurs, notify dispensing agency   |

\* Versions 39 and higher

\*\* Not available on the 2000 Series