

MOOG Medical Devices Group  
Curlin 6000 Series™ Ambulatory Infusion Pump

# CLINICIAN INSTRUCTIONS



## MOOG®

Enhancing Healthcare. Enriching Lives.

### GETTING STARTED

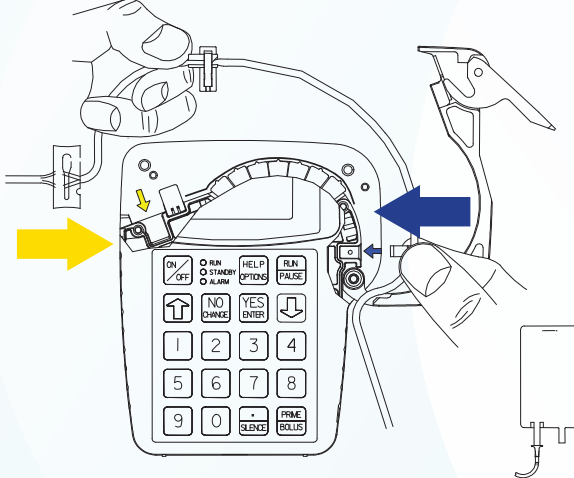
## CAUTION:

Previous RX must be cleared from the pump prior to new patient use. Refer to the “CURLIN 6000 TRAINING & QUICK REFERENCE GUIDE FOR BETWEEN PATIENT USE” (Contact Customer Service for information).

## INSTALLING/CHANGING THE BATTERIES

1. PAUSE the pump.
2. Turn the pump OFF.
3. Open the battery door by sliding the gray “slider” to the right to the “UNLOCK” position and slide the door down to remove.
4. Remove old batteries from the top first. Insert new batteries bottom or flat side against the coils first, then push the top side into place.
5. Replace door and return slider to “LOCK” position and turn pump ON.
6. Press **YES** to PROGRAM (or LIBRARY if using the protocol LIBRARY).
7. Press **YES** to RESUME (or **YES** to Repeat RX if current container has not begun or if changing the container).
8. Press **RUN** to start.

## INSTALLING THE ADMINISTRATION SET



1. Open pump door.
2. Remove the old tubing.
3. Remove the new administration set from the package.
4. Twist and remove breakaway tab from YELLOW Flow-Stop.
5. Locate the BLUE and YELLOW arrows inside the pump as a reference point.
6. Insert the tubing using the reference points.
7. Ensure the tubing passes through the notch in front of the door hinge.
8. Center tubing over pumping fingers.
9. Close the door securely. Be sure top of door is flush with top of the pump.

## PRIMING THE SET

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

NOTE: Review program settings prior to priming.

NOTE: Filters must be primed in the upright position (do not invert). Refer to Instructions for Use in set package.

### BY GRAVITY:

NOTE: To remove air from IV bag, turn bag upside down after attaching the set and gently squeeze bag while priming until air is eliminated from the bag.

1. Twist and remove breakaway tab from YELLOW Flow-Stop prior to connecting to solution container.
2. Squeeze YELLOW Flow-Stop between thumb and forefinger to allow fluid to flow through tubing.

### BY PUMP:

NOTE: Therapy must be programmed and administration set must be installed into the pump prior to pump priming. Sets with in-line ASV must be primed on the pump.

1. Release any clamps on the administration set.
2. Press the **PRIME** key from the "RUN TO START" screen.
3. Press and hold the **PRIME** key until set is free of air; release **PRIME** key to stop (each prime cycle allows up to 6 mL of fluid).
4. Press the **YES** key to exit priming.

## CHANGING THE SOLUTION CONTAINER

1. Press the **PAUSE** key.
2. Change the solution container.
3. Highlight REPEAT RX, then press **YES**.
4. Highlight correct therapy if requested, then press **YES**.
5. If any on-screen alerts appear, press the **YES** key.
6. Note any on-screen ADVISORY and press **YES** to continue.
7. The program will auto-scroll (or confirm each field by pressing **YES**).
8. Press **RUN** to start the infusion.

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Curlin 6000 Series™ Ambulatory Infusion Pump

# CLINICIAN INSTRUCTIONS



## MOOG®

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### PROGRAMMING

## PROGRAMMING A CONTINUOUS THERAPY USING MANUAL PROGRAM MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
  2. Highlight PROGRAM from the SELECT menu and press **YES**.
- NOTE: The following screen ("NEW PROGRAM") will not appear if the previous RX has been cleared from the pump. If this screen does not appear, skip to step #4.
3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
  4. Highlight CONTINUOUS from the therapy selection menu and press **YES**. If any on-screen alerts appear, press the **YES** key.
  5. With Unidentified highlighted, press **YES** (this indicates Manual Programming Mode).
  6. Select units: Press **YES** if units desired is indicated (choices are mg, mcg or mL). To change units press **NO** until desired unit is reached, then press **YES** to confirm. If mg or mcg is selected, enter the concentration and press **YES**.
  7. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
  8. Press **YES** to leave MedLMTS Off, or press **NO** to set MedLMTS. Refer to the User Manual for MedLMTS instructions.
  9. At Next? Press **YES** to continue.

NOTE: Bag Volume should include overfill volume if pump priming and/or a KVO is programmed.

10. Enter Bag Volume, press **YES**.

NOTE: To force an auto-calculation, enter any 2 of the 3 entries: Amt TBI, RATE or TIME, the unknown field will auto-calculate. Bypass the unknown field by using the **DOWN ARROW** key. Enter the known fields pressing **YES** to confirm each. The unknown field will auto-calculate. Press **YES** to confirm this field.

11. Enter Amt TBI (if known), press **YES**.
12. Enter RATE (if known), press **YES**.
13. Enter TIME (if known), press **YES**.
14. Continue pressing **YES** if needed until the KVO field is highlighted.

NOTE: If a KVO rate of 0.1 to 10 mL is entered, the pump will give audible alerts every 20 minutes at the end of the infusion. Whereas if zero KVO is entered the pump will alarm every 3 seconds at the end of the infusion.

15. Enter KVO rate (if any), press **YES**.
16. Press **YES** at DONE?

## PROGRAMMING A CONTINUOUS THERAPY USING PROTOCOL LIBRARY MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
  2. Highlight LIBRARY from the SELECT menu and press **YES**.
  3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
- NOTE: While YES is highlighted in the Page Down field, press **YES** to move to the next page while in the CAT (category) and DRG (drug) menus.
4. Highlight the desired CAT, press **YES**.
  5. Highlight the desired DRG, press **YES**.
  6. Press **YES** to ACCEPT?
  7. If any on-screen alerts appear, press the **YES** key.
  8. Note any on-screen ADVISORY and press **YES** to continue.
  9. Press **YES** to confirm the dosing UNITS.
  10. If a concentration is present, ensure the concentration matches the medication container. If correct, press **YES** to confirm.
  11. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
  12. At Next? press **YES** to continue.
  13. Accept pre-programmed values for BAG VOL, Amt TBI, RATE, TIME and KVO if they are correct, by pressing **YES** to each field.
  14. If changes are needed to the pre-programmed values, highlight the desired field and press **NO**. Enter the correct value and press **YES**.
  15. Continue as above until programming is completed.
  16. Press **YES** at DONE?

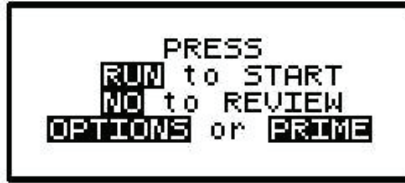
## SETTING A DELAYED START

1. At the Delay field, press **NO** to OFF, then press **YES** to ON.
2. Enter Time infusion should begin (HH:MM), press **YES**.
3. Enter Date infusion should begin (MM/DD/YY), press **YES**.
4. Press **YES** to ACCEPT.

## SETTING MEDLMTS

1. At the medLMTS field, press NO to OFF, then press YES to ON.
2. Enter the upper limits of the infusion rate (the range for this field is 0.1 to 400 mL/hr), then press YES.
3. Press YES to ACCEPT.

### "RUN TO START" SCREEN



1. Press the **NO** key to review the program and/or change the RX (see CHANGING THE RX section for instructions).
2. Press the **OPTIONS** Key to review or change desired pump settings (see OPTIONS section for instructions).
3. Press the **PRIME** Key to prime the set (see Priming section under GETTING STARTED for instructions).
4. Press **RUN** to start the infusion.

### CHANGING THE RX (BAG VOL, Amt TBI, RATE, TIME, KVO)

1. Press the **PAUSE** key.
2. Press **YES** to RESUME.
3. Press **NO** to review.
4. Press **YES** to each field until the value to change is reached.
5. At the desired field(s), enter the new program parameters (enter access code if prompted). If an access code was needed, enter the new parameters again. Press **YES** to confirm.
6. Press **YES** to all other highlighted areas if no other changes are to be made.
7. At DONE? press **YES**.
8. Press **RUN** to start the infusion.

## OPTIONS FOR CONTINUOUS THERAPY

**NOTE:** Press **YES** at each field to advance to the next field. Pressing **YES** to ACCEPT OPT at the end of the menu is mandatory to confirm all changes made in the OPTIONS menu.

**Lock:** This is the security level setting. Press **YES** to accept or **NO** to change Lock Setting. Enter access code if prompted. Press **YES** to accept new setting.

**HRLY TOT:** This is the hourly infusion totals. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. Use the **UP/Down Arrow** keys to view the previous 24 hour totals. Press **NO** to exit the screen.

**CLR HRLY:** Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. At the ACCEPT? YES/NO field, press **YES** to clear or **NO** to retain the Hourly Totals and exit the screen.

**medLMTS:** This OPTION appears only if MedLMTS (medication limits) have been programmed. This feature allows for program parameters to be titrated without interrupting the infusion. Press **YES** to leave the screen off or **NO** to titrate, then press **YES** to ON. Enter new infusion parameters and press **YES** to accept.

**DN Occlu:** This is the downstream occlusion sensitivity setting (default setting is LOW). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AIR SENS:** This is the air-in-line sensitivity setting (default setting is 0.5 mL). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AUDIO:** This is the audible volume control: Press **1-9** to hear level, press **YES** to accept the desired volume.

**POWER CK:** This is the power source with power graph. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view the power graph. Screen automatically returns to OPTIONS menu after several seconds.

**ACCEPT OPT:** Press **YES** to accept any changes made. Pressing **NO** will cancel any setting changes.



## PROGRAMMING AN INTERMITTENT THERAPY USING MANUAL PROGRAM MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
  2. Highlight PROGRAM from the SELECT menu and press **YES**.
- NOTE: The following screen ("NEW PROGRAM") will not appear if the previous RX has been cleared from the pump. If this screen does not appear, skip to step #4.
3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
  4. Highlight INTERMITTENT from the therapy selection menu and press **YES**. If any on-screen alerts appear, press the **YES** key.
  5. With Unidentified highlighted, press **YES** (this indicates Manual Programming Mode).
  6. Select units: Press **YES** if units desired is indicated (choices are mg, mcg or mL). To change units press **NO** until desired unit is reached, then press **YES** to confirm. If mg or mcg is selected, enter the concentration and press **YES**.
  7. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
  8. At Next? Press **YES** to continue.
  9. Enter Bag Volume, press **YES**.

NOTE: To force an auto-calculation, enter any 2 of the 3 entries: AMT/DOSE, DOSE RATE or DOSE DURATION, the unknown field will auto-calculate. Bypass the unknown field by using the **DOWN ARROW** key. Enter the known fields pressing **YES** to confirm each. The unknown field will auto-calculate. Press **YES** to confirm this field.

10. Enter AMT/DOSE (if known), press **YES**.
11. Enter DOSE RATE (if known), press **YES**.
12. Enter DOSE DURA (if known), press **YES**.
13. Continue pressing **YES** if needed until the DOSE Freq field is highlighted.
14. Enter DOSE Freq, press **YES**.

NOTE: If a KVO rate of 0.1 to 10 mL is entered, the pump will give audible alerts every 20 minutes at the end of the infusion. Whereas if zero KVO is entered the pump will alarm every 3 seconds at the end of the infusion.

15. Enter KVO rate (if any), press **YES**.
16. DOSE/BAG is auto-calculated. Press **YES** to confirm or **NO** to change, input desired doses then press **YES**.
17. The next 2 fields are auto-calculated: REQ VOL and TOT Time. Press **YES** to confirm each field.
18. Press **YES** at DONE?

## PROGRAMMING AN INTERMITTENT THERAPY USING PROTOCOL LIBRARY MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

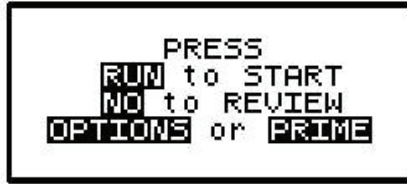
NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
  2. Highlight LIBRARY from the SELECT menu and press **YES**.
  3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
- NOTE: While YES is highlighted in the Page Down field, press **YES** to move to the next page while in the CAT (category) and DRG (drug) menus.
4. Highlight the desired CAT, press **YES**.
  5. Highlight the desired DRG, press **YES**.
  6. Press **YES** to ACCEPT?
  7. If any on-screen alerts appear, press the **YES** key.
  8. Note any on-screen ADVISORY and press **YES** to continue.
  9. Press **YES** to confirm the dosing UNITS.
  10. If a concentration is present, ensure the concentration matches the medication container. If correct, press YES to confirm.
  11. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
  12. At Next? press **YES** to continue.
  13. Accept pre-programmed values for BAG VOL, AMT/DOSE, DOSE RATE, DOSE DURA, DOSE Freq, KVO and DOSE/BAG if they are correct, by pressing **YES** to each field.
  14. If changes are needed to the pre-programmed values, highlight the desired field and press **NO**. Enter the correct value and press **YES**.
  15. Continue as above until REQ VOL is highlighted.
  16. The next 2 fields are auto-calculated: REQ VOL and TOT Time. Press **YES** to confirm each field.
  17. Press **YES** at DONE?

## SETTING A DELAYED START

1. At the Delay field, press **NO** to OFF, then press **YES** to ON.
2. Enter Time infusion should begin (HH:MM), press **YES**.
3. Enter Date infusion should begin (MM/DD/YY), press **YES**.
4. Press **YES** to ACCEPT.

### "RUN TO START" SCREEN



1. Press the **NO** key to review the program and/or change the RX (see CHANGING THE RX section for instructions).
2. Press the **OPTIONS** Key to review or change desired pump settings (see OPTIONS section for instructions).
3. Press the **PRIME** Key to prime the set (see Priming section under GETTING STARTED for instructions).
4. Press **RUN** to start the infusion.

### CHANGING THE RX (BAG VOL, AMT/DOSE, DOSE RATE, DOSE DURA, DOSE FREQ, KVO, DOSE/BAG)

1. Press the **PAUSE** key.
2. Press **YES** to RESUME.
3. Press **NO** to review.
4. Press **YES** to each field until the value to change is reached.
5. At the desired field(s), enter the new program parameters (enter access code if prompted). If an access code was needed, enter the new parameters again. Press **YES** to confirm.
6. Press **YES** to all other highlighted areas if no other changes are to be made.
7. At DONE? press **YES**.
8. Press **RUN** to start the infusion.

## OPTIONS FOR INTERMITTENT THERAPY

**NOTE:** Press **YES** at each field to advance to the next field. Pressing **YES** to ACCEPT OPT at the end of the menu is mandatory to confirm all changes made in the OPTIONS menu.

**Lock:** This is the security level setting. Press **YES** to accept or **NO** to change Lock Setting. Enter access code if prompted. Press **YES** to accept new setting.

**HRLY TOT:** This is the hourly infusion totals. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. Use the **UP/DOWN ARROW** keys to view the previous 24 hour totals. Press **NO** to exit the screen.

**CLR HRLY:** Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. At the ACCEPT? YES/NO field, press **YES** to clear or **NO** to retain the Hourly Totals and exit the screen.

**DN Occlu:** This is the downstream occlusion sensitivity setting (default setting is LOW). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AIR SENS:** This is the air-in-line sensitivity setting (default setting is 0.5 mL). Press **YES** to accept or **NO** to change then press **YES** to accept.

**NEXT DOSE:** Press **YES** to leave the screen off. If the infusion schedule needs to be reset (ex. patient misses a dose), press **NO**, enter the HH:MM until the next dose, then press **YES** to accept.

**AUDIO:** This is the audible volume control: Press **1-9** to hear level, press **YES** to accept the desired volume.

**POWER CK:** This is the power source with power graph. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view the power graph. Screen automatically returns to OPTIONS menu after several seconds.

**ACCEPT OPT:** Press **YES** to accept any changes made. Pressing **NO** will cancel any setting changes.

## PROGRAMMING A PCA THERAPY USING MANUAL PROGRAM MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
2. Highlight PROGRAM from the SELECT menu and press **YES**.  
NOTE: The following screen ("NEW PROGRAM") will not appear if the previous RX has been cleared from the pump. If this screen does not appear, skip to step #4.
3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
4. Highlight PCA from the therapy selection menu and press **YES**. If any on-screen alerts appear, press the **YES** key.
5. With Unidentified highlighted, press **YES** (this indicates Manual Programming Mode).
6. Select UNITS: Press **YES** if units desired is indicated (choices are mg, mcg or mL). To change units press **NO** until desired unit is reached, then press **YES** to confirm. If mg or mcg is selected, enter the concentration and press **YES**.
7. Select ADMIN RT: Press **YES** if administration route desired is indicated (choices are IV, Epidural or SQ). To change ADMIN RT press **NO** until desired route is reached, then press **YES** to confirm.
8. Enter the LOAD DOSE amount if ordered. If no loading dose is ordered, leave at zero, then press **YES** to confirm.
9. Press **YES** to leave MedLMTS Off, or press **NO** to set MedLMTS. Refer to the User Manual for MedLMTS instructions.
10. At Next? Press **YES** to continue.
11. Enter Bag Volume, press **YES**.
12. Enter BASL RATE (if any), press **YES**.
13. Enter Pt BOLUS dose (if any), press **YES**.
14. Enter the Pt BOLUS INT (if Pt BOLUS is set), press **YES**.
15. Enter # BOLUS/hr, press **YES** (60/Bolus INT = max # Boluses in one hour. This field may be set to the maximum boluses or fewer if ordered).
16. Press **YES** at DONE?

## PROGRAMMING A PCA THERAPY USING PROTOCOL LIBRARY MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

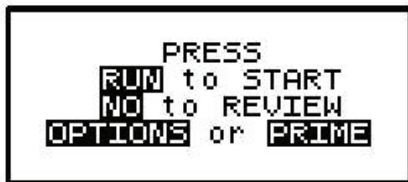
NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
  2. Highlight LIBRARY from the SELECT menu and press **YES**.
  3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
- NOTE: While YES is highlighted in the Page Down field, press **YES** to move to the next page while in the CAT (category) and DRG (drug) menus.
4. Highlight the desired CAT, press **YES**.
  5. Highlight the desired DRG, press **YES**.
  6. Press **YES** to ACCEPT?
  7. If any on-screen alerts appear, press the **YES** key.
  8. Note any on-screen ADVISORY and press **YES** to continue.
  9. Press **YES** to confirm the dosing UNITS.
  10. If a concentration is present, ensure the concentration matches the medication container. If correct, press **YES** to confirm.
  11. Press **YES** to confirm the ADMIN Rt (Administration Route).
  12. Enter the LOAD DOSE amount if ordered. If no loading dose is ordered, leave at zero, then press **YES** to confirm.
  13. At Next? press **YES** to continue.
  14. Accept pre-programmed values for BAG VOL, BASL RATE, Pt BOLUS, BOLUS INT and # BOLUS/hr if they are correct, by pressing **YES** to each field.
  15. If changes are needed to the pre-programmed values, highlight the desired field and press **NO**. Enter the correct value and press **YES**.
  16. Continue as above until programming is completed.
  17. Press **YES** at DONE?

## SETTING MEDLMTS

1. At the medLMTS field, press **NO** to OFF, then press **YES** to ON.
2. Enter the dosing limitations of the infusion as follows when applicable:
  - a. MAX RATE (Maximum Rate) limits: Enter the upper limits of the basal infusion rate (the range for this field is 0 – 9.9 mL/hr for IV Route, 0 – 25 mL/hr for EPIdural Route, and 0 – 5 mL/hr for SQ Route), then press **YES**.
  - b. ΔRate (Delta Rate): Enter the incremental rate change allowed, if applicable, then press YES. Some prescriptions include incremental levels or delta limitations (ex. “Do not change the rate more than 1 mg every hour”. Enter 1 mg in the Δ Rate field). If no delta limitations are needed, leave this field zero and press **YES**.
  - c. ΔTime (Delta Time): Enter the incremental time change allowed, if applicable, then press YES. Some prescriptions include incremental levels or delta limitations (using the previous ex. “Do not change the rate more than 1 mg every hour”, enter 1:00 {1 hr} in the Δ Time field). If no delta limitations are needed, leave this field 00:00 and press **YES**.
  - d. Max BOLUS (Maximum Bolus Dose): Enter the upper limits of the patient bolus dose (the range for this field is 0 – 9.9 mL/hr for IV, 0 – 25 mL/hr for EPIdural, and 0 – 5 mL/hr for SQ), then press **YES**.
  - e. MiniINT (Minimum Bolus Interval): Enter the minimum amount of time allowed between patient bolus doses, then press **YES**.
  - f. #BOLUS/hr (Number of Boluses allowed per hour): Enter the maximum number of patient boluses allowed per hour, then press **YES**.
3. Press **YES** to ACCEPT.

### "RUN TO START" SCREEN



1. Press the **NO** key to review the program and/or change the RX (see CHANGING THE RX section for instructions).
2. Press the **OPTIONS** Key to review or change desired pump settings (see OPTIONS section for instructions).
3. Press the **PRIME** Key to prime the set (see Priming section under GETTING STARTED for instructions).
4. Press **RUN** to start the infusion.

### CHANGING THE RX (BAG VOL, BASL RATE, Pt BOLUS, BOLUS INT, # BOLS/hr)

1. Press the **PAUSE** key.
2. Press **YES** to RESUME.
3. Press **NO** to review.
4. Press **YES** to each field until the value to change is reached.
5. At the desired field(s), enter the new program parameters (enter access code if prompted). If an access code was needed, enter the new parameters again. Press **YES** to confirm.
6. Press **YES** to all other highlighted areas if no other changes are to be made.
7. At DONE? press **YES**.
8. Press **RUN** to start the infusion.

## OPTIONS FOR PCA THERAPY

**NOTE:** Press **YES** at each field to advance to the next field. Pressing **YES** to ACCEPT OPT at the end of the menu is mandatory to confirm all changes made in the OPTIONS menu.

**Lock:** This is the security level setting. Press **YES** to accept or **NO** to change Lock Setting. Enter access code if prompted. Press **YES** to accept new setting.

**Clin DOSE:** This is the Clinician Dose feature. Press **YES** to leave the screen off. If an extra Clinician Dose is ordered, press **NO** to OFF (enter access code if prompted, then press **NO** to OFF again). Press **YES** to ON and enter the Clinician Dose. Press **YES** to confirm Clinician Dose and **YES** to ACCEPT?

**SHIFT TOT:** This is the accumulated infusion data. Press **YES** to leave the screen off. To view, press **NO** to OFF and **YES** to ON. To clear Shift Totals, press **NO** to the EXIT field, then **YES** to CLEAR. Press **YES** again to EXIT the menu.

**HRLY TOT:** This is the hourly infusion totals. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. Use the **UP/DOWN ARROW** keys to view the previous 24 hour totals. Press **NO** to exit the screen.

**CLR HRLY:** Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. At the ACCEPT? YES/NO field, press **YES** to clear or **NO** to retain the Hourly Totals and exit the screen.

**medLMTS:** This OPTION appears only if MedLMTS (medication limits) have been programmed. This feature allows for program parameters to be titrated without interrupting the infusion. Press **YES** to leave the screen off or **NO** to titrate, then press **YES** to ON. Enter new infusion parameters and press **YES** to accept.

**DN Occlu:** This is the downstream occlusion sensitivity setting (default setting is HIGH). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AIR SENS:** This is the air-in-line sensitivity setting (default setting is 0.5 mL). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AUDIO:** This is the audible volume control: Press **1-9** to hear level, press **YES** to accept the desired volume.

**POWER CK:** This is the power source with power graph. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view the power graph. Screen automatically returns to OPTIONS menu after several seconds.

**ACCEPT OPT:** Press **YES** to accept any changes made. Pressing **NO** will cancel any setting changes.

## PCA TERMS & DEFINITIONS

LOADING DOSE - Dose given at start of therapy only

BASAL RATE- Continuous rate

PT BOLUS - PCA demand dose

BOLUS INTERVAL - Lockout time between bolus doses

# OF BOLUSES/HR - Number of total boluses allowed per hour

CLINICIAN DOSE - Clinician given dose



## PROGRAMMING A TPN THERAPY USING MANUAL PROGRAM MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
2. Highlight PROGRAM from the SELECT menu and press **YES**.  
NOTE: The following screen ("NEW PROGRAM") will not appear if the previous RX has been cleared from the pump. If this screen does not appear, skip to step #4.
3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
4. Highlight TPN from the therapy selection menu and press **YES**. If any on-screen alerts appear, press the **YES** key.
5. With Unidentified highlighted, press **YES** (this indicates Manual Programming Mode).
6. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
7. At Next? Press **YES** to continue.

NOTE: Bag Volume should include overfill volume if pump priming and/or a KVO is programmed.

8. Enter Bag Volume, press **YES**.

NOTE: To force an auto-calculation, enter any 3 of the 4 entries: Vol TBI, INF RATE, UP/DN Ramp or TOT TIME, the unknown field will auto-calculate. Bypass the unknown field by using the **DOWN ARROW** key (typically the INF RATE). Enter the known fields pressing **YES** to confirm each. The unknown field will auto-calculate. Press **YES** to confirm this field.

9. Enter Vol TBI (if known), press **YES**.
10. Enter INF RATE (if known), press **YES**.
11. Enter UP Ramp and DN Ramp (if any), press **YES** after each entry.
12. Enter TOT TIME (if known), press **YES**. Continue pressing **YES** if needed until the KVO field is highlighted.

NOTE: If a KVO rate of 0.1 to 10 mL is entered, the pump will give audible alerts every 20 minutes at the end of the infusion. Whereas if zero KVO is entered the pump will alarm every 3 seconds at the end of the infusion.

13. Enter KVO rate (if any), press **YES**.
14. Press **YES** at DONE?

## PROGRAMMING A TPN THERAPY USING PROTOCOL LIBRARY MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

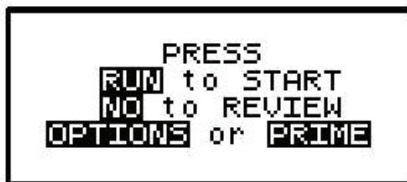
NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
  2. Highlight LIBRARY from the SELECT menu and press **YES**.
  3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
- NOTE: While YES is highlighted in the Page Down field, press **YES** to move to the next page while in the CAT (category) and DRG (drug) menus.
4. Highlight the desired CAT, press **YES**.
  5. Highlight the desired DRG, press **YES**.
  6. Press **YES** to ACCEPT?
  7. If any on-screen alerts appear, press the **YES** key.
  8. Note any on-screen ADVISORY and press **YES** to continue.
  9. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
  10. At Next? press **YES** to continue.
  11. Accept pre-programmed values for BAG VOL, Vol TBI, INF RATE, UP Ramp, DN Ramp, TOT TIME and KVO if they are correct, by pressing **YES** to each field.
  12. If changes are needed to the pre-programmed values, highlight the desired field and press **NO**. Enter the correct value and press **YES**.
  13. Continue as above until programming is completed.
  14. Press **YES** at DONE?

## SETTING A DELAYED START

1. At the Delay field, press **NO** to OFF, then press **YES** to ON.
2. Enter Time infusion should begin (HH:MM), press **YES**.
3. Enter Date infusion should begin (MM/DD/YY), press **YES**.
4. Press **YES** to ACCEPT.

## "RUN TO START" SCREEN



1. Press the **NO** key to review the program and/or change the RX (see CHANGING THE RX section for instructions).
2. Press the **OPTIONS** Key to review or change desired pump settings (see OPTIONS section for instructions).
3. Press the **PRIME** Key to prime the set (see Priming section under GETTING STARTED for instructions).
4. Press **RUN** to start the infusion.

## **CHANGING THE RX (BAG VOL, Vol TBI, INF RATE, UP Ramp, DN Ramp, TOT TIME, KVO)**

1. Press the **PAUSE** key.
2. Press **YES** to RESUME.
3. Press **NO** to review.
4. Press **YES** to each field until the value to change is reached.
5. At the desired field(s), enter the new program parameters (enter access code if prompted). If an access code was needed, enter the new parameters again. Press **YES** to confirm.
6. Press **YES** to all other highlighted areas if no other changes are to be made.
7. At DONE? press **YES**.
8. Press **RUN** to start the infusion.

## **OPTIONS FOR TPN THERAPY**

**NOTE:** Press **YES** at each field to advance to the next field. Pressing **YES** to ACCEPT OPT at the end of the menu is mandatory to confirm all changes made in the OPTIONS menu.

**Lock:** This is the security level setting. Press **YES** to accept or **NO** to change Lock Setting. Enter access code if prompted. Press **YES** to accept new setting.

**HRLY TOT:** This is the hourly infusion totals. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. Use the **UP/DOWN ARROW** keys to view the previous 24 hour totals. Press **NO** to exit the screen.

**CLR HRLY:** Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. At the ACCEPT? YES/NO field, press **YES** to clear or **NO** to retain the Hourly Totals and exit the screen.

**DN Ramp:** Press **YES** to leave the screen off. If an immediate down ramp is needed, press **NO** to OFF and **YES** to ON to access early down ramp feature. Press **YES** to maintain current DN Ramp time or **NO** to change the amount of down ramp time, then press **YES** to accept.

**DN Occlu:** This is the downstream occlusion sensitivity setting (default setting is LOW). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AIR SENS:** This is the air-in-line sensitivity setting (default setting is 0.5 mL). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AUDIO:** This is the audible volume control: Press **1-9** to hear level, press **YES** to accept the desired volume.

**POWER CK:** This is the power source with power graph. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view the power graph. Screen automatically returns to OPTIONS menu after several seconds.

**ACCEPT OPT:** Press **YES** to accept any changes made. Pressing **NO** will cancel any setting changes.

## PROGRAMMING A VARIABLE THERAPY USING MANUAL PROGRAM MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
2. Highlight PROGRAM from the SELECT menu and press **YES**.  
NOTE: The following screen ("NEW PROGRAM") will not appear if the previous RX has been cleared from the pump. If this screen does not appear, skip to step #4.
3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
4. Highlight VARIABLE from the therapy selection menu and press **YES**. If any on-screen alerts appear, press the **YES** key.
5. With Unidentified highlighted, press **YES** (this indicates Manual Programming Mode).
6. Select units: Press **YES** if units desired is indicated (choices are mg, mcg or mL). To change units press **NO** until desired unit is reached, then press **YES** to confirm. If mg or mcg is selected, enter the concentration and press **YES**.
7. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
8. At Next? Press **YES** to continue.
9. Enter Bag Volume, press **YES**.
10. Enter # DOSES, press **YES** (# DOSES is the number of rate changes or "steps" for the therapy).  
NOTE: If a KVO rate of 0.1 to 10 mL is entered, the pump will give audible alerts every 20 minutes at the end of the infusion. Whereas if zero KVO is entered the pump will alarm every 3 seconds at the end of the infusion.
11. Enter KVO rate (if any), press **YES**.
12. At Next? Press **YES** to continue.  
NOTE: To force an auto-calculation, enter any 2 of the 3 entries: Amt TBI, RATE or TIME, the unknown field will auto-calculate. Bypass the unknown field by using the **DOWN ARROW** key. Enter the known fields pressing **YES** to confirm each. The unknown field will auto-calculate. Press **YES** to confirm this field.
13. Enter Amt TBI (if known), press **YES**.
14. Enter RATE (if known), press **YES**.
15. Enter TIME (if known), press **YES**.
16. Continue pressing **YES** if needed until the NEXT? field is highlighted.
17. At Next? Press **YES** to continue.
18. Continue to enter Amt TBI, RATE and TIME for each of the subsequent doses, pressing **YES** to confirm each.  
NOTE: If the remaining bag volume is to be infused on the final dose, enter the entire bag volume in the Amt TBI field. An Alert will appear on the screen, alerting the user the MAX amount that can be entered. When the final dose screen returns, enter the max amount listed into the Amt TBI field and press **YES** to confirm. Continue entering the RATE and TIME, pressing **YES** to confirm each.
19. At Next? Press **YES** to continue.
20. The last screen is the Summary screen. Press **YES** after TOT DOSES, TOT TIME and REQ VOL to confirm each value.
21. Press **YES** at DONE?

## PROGRAMMING A VARIABLE THERAPY USING PROTOCOL LIBRARY MODE

NOTE: When operating the pump on battery power, the LCD screen dims after a period of time to conserve battery power. Any keypress will illuminate the screen.

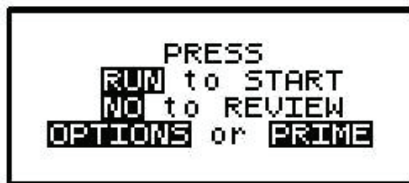
NOTE: Use the **UP/DOWN ARROW** keys to move highlighter. Use the numeric keys for data entry.

1. Turn the pump ON and wait for the self-test to complete.
  2. Highlight LIBRARY from the SELECT menu and press **YES**.
  3. Highlight NEW PROGRAM and press **YES**. Enter access code, if prompted.
- NOTE: While YES is highlighted in the Page Down field, press **YES** to move to the next page while in the CAT (category) and DRG (drug) menus.
4. Highlight the desired CAT, press **YES**.
  5. Highlight the desired DRG, press **YES**.
  6. Press **YES** to ACCEPT?
  7. If any on-screen alerts appear, press the **YES** key.
  8. Note any on-screen ADVISORY and press **YES** to continue.
  9. Press **YES** to confirm the dosing UNITS.
  10. If a concentration is present, ensure the concentration matches the medication container. If correct, press **YES** to confirm.
  11. Press **YES** to leave the Delayed Start Off, or press **NO** to set a delay and refer to the Delayed Start section.
  12. At Next? press **YES** to continue.
  13. Accept pre-programmed values for BAG VOL, # DOSES and KVO if they are correct, by pressing **YES** to each field.
  14. If changes are needed to the pre-programmed values, highlight the desired field and press **NO**. Enter the correct value and press **YES**.
  15. Continue as above until NEXT? Is highlighted.
  16. At NEXT? press **YES** to continue.
  17. Accept pre-programmed values for Amt TBI, RATE and TIME for each dose if they are correct, by pressing **YES** to each field.
  18. If changes are needed to the pre-programmed values, highlight the desired field and press **NO**. Enter the correct value and press **YES**. At the NEXT? field in each dose, press **YES** to continue.
  19. Press **YES** to each value in the summary screen: TOT DOSES, TOT TIME, REQ VOL.
  20. Press **YES** at DONE?

## SETTING A DELAYED START

1. At the Delay field, press **NO** to OFF, then press **YES** to ON.
2. Enter Time infusion should begin (HH:MM), press **YES**.
3. Enter Date infusion should begin (MM/DD/YY), press **YES**.
4. Press **YES** to ACCEPT.

### "RUN TO START" SCREEN



1. Press the **NO** key to review the program and/or change the RX (see CHANGING THE RX section for instructions).
2. Press the **OPTIONS** Key to review or change desired pump settings (see OPTIONS section for instructions).
3. Press the **PRIME** Key to prime the set (see Priming section under GETTING STARTED for instructions).
4. Press **RUN** to start the infusion.

### CHANGING THE RX (BAG VOL, # DOSES, KVO, Amt TBI, RATE, TIME)

1. Press the **PAUSE** key.
2. Press **YES** to RESUME.
3. Press **NO** to review.
4. Press **YES** to each field until the value to change is reached.
5. At the desired field(s), enter the new program parameters (enter access code if prompted). If an access code was needed, enter the new parameters again. Press **YES** to confirm.
6. Press **YES** to all other highlighted areas if no other changes are to be made.
7. At DONE? press **YES**.
8. Press **RUN** to start the infusion.

## OPTIONS FOR VARIABLE THERAPY

**NOTE:** Press **YES** at each field to advance to the next field. Pressing **YES** to ACCEPT OPT at the end of the menu is mandatory to confirm all changes made in the OPTIONS menu.

**Lock:** This is the security level setting. Press **YES** to accept or **NO** to change Lock Setting. Enter access code if prompted. Press **YES** to accept new setting.

**HRLY TOT:** This is the hourly infusion totals. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. Use the **UP/DOWN ARROW** keys to view the previous 24 hour totals. Press **NO** to exit the screen.

**CLR HRLY:** Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view. At the ACCEPT? YES/NO field, press **YES** to clear or **NO** to retain the Hourly Totals and exit the screen.

**DN Occlu:** This is the downstream occlusion sensitivity setting (default setting is LOW). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AIR SENS:** This is the air-in-line sensitivity setting (default setting is 0.5 mL). Press **YES** to accept or **NO** to change then press **YES** to accept.

**AUDIO:** This is the audible volume control: Press **1-9** to hear level, press **YES** to accept the desired volume.

**POWER CK:** This is the power source with power graph. Press **YES** to leave the screen off or **NO** to change to ON, then press **YES** to ON to view the power graph. Screen automatically returns to OPTIONS menu after several seconds.

**ACCEPT OPT:** Press **YES** to accept any changes made. Pressing **NO** will cancel any setting changes.

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# CLINICIAN INSTRUCTIONS



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KEYPAD & FUNCTIONS





### KEYPAD FUNCTION

**ON/OFF:** Used to turn the pump on and off. When the pump is running, however, the PAUSE key must be used to stop the infusion first and then the OFF key can be pressed to turn the pump off. This requirement prevents the interruption of an infusion by a single accidental press of the OFF key.

**RUN/PAUSE:** Used to start or pause the motor of the pump, which, in turn, starts or pauses fluid delivery. When the pump is running, pressing this key will pause the pump. When the pump is paused, pressing this key while at the RUN to Start screen will start the pump. This key is also used to terminate a pump alarm.

Note: If the cause of the alarm is not resolved when the pump is resumed, the alarm will recur.

**UP ARROW:** Used to scroll the highlight bar or field cursor up on the display screen.

Note: The Up arrow will not accept a selection. Selection confirmations must be made with the YES/ENTER key.

**DOWN ARROW:** Used to scroll the highlight bar or field cursor down on the display screen.

Note: The Down arrow will not accept a selection. Selection confirmations must be made with the YES/ENTER key.

**NO/CHANGE:** Used to respond “NO” to data or questions presented or to reject or to change highlighted data.

**YES/ENTER:** Used to respond “YES” to data or questions presented or to accept highlighted data when prompted to press ENTER key.

Note: The Moog Curlin Infusion pump requires confirmation to each entry to move to the next field or screen.

**HELP/OPTIONS:** Used to request a help screen when the pump is paused or at the "Infusion Complete" screen. Help screens correspond to words in the highlight bar. Use the UP/DOWN ARROW keys to highlight the selection needing HELP. It is also used to access the OPTIONS menu when the pump is running. When the OPTIONS menu is displayed, help is again available with this key. When in a help screen, use the arrow keys to scroll through the help message. Press the HELP key again to exit Help. Refer to the OPTIONS section of the individual therapy modes within this booklet for assistance with OPTIONS.

**./SILENCE:** Used as a decimal point when programming numeric data. Used also to temporarily silence the alarm (for one-minute intervals).

**PRIME/BOLUS:** Used to prime fluid through the tubing to clear it of air or to administer a patient demand bolus dose of medication in PCA mode.

**0 - 9 Numeric keys:** Used for data entry during the programming screens and the display of Information-On-Demand (IOD) functions when the pump is in the RUN mode.

### **INFORMATION ON DEMAND (IOD) KEYS:**

To view any of the Information-On-Demand (IOD) screens on the pump display, press the related key while the pump is infusing (running a therapy). The information requested will be displayed for several seconds and then the display will return to the previous infusion screen.

The first row of numbers (1 through 4) function as IOD in all 5 therapy modes.

The second and third rows of numbers (5 through 0) function as IOD in the PCA Mode ONLY.

Below is the designation and functionality of the ten numeric keys of the IOD keyboard:

### **IOD FUNCTION FOR ALL THERAPIES:**

1. Date and Time (DateTime): The Date and Time screen displays the current date and time according to the pump.
2. Power Check (PowrChk): The Power Check screen displays the active power source of the pump, whether internal (batteries) or external. If the active source is the C-cell batteries, a bar graph will indicate the amount of power remaining in the batteries.
3. Option Info (OptnInfo): This screen provides information on 4 selected options. The information displayed here includes the status of the Lock Level, Down Occlusion alarm sensitivity, Air-in-Line alarm sensitivity, and the Audio Level. Changes to this screen are not allowed.
4. Hold Screen (HoldScrn): Pressing the **Hold Scrn (#4)** key will hold the current Run screen information for an additional 8 seconds and then the pump will return to the normal running screen. The hold screen functions for the Infusion Running Screen only.

### **IOD FUNCTION FOR PCA THERAPY ONLY:**

5. Hourly Total (HrlyTot): The information displayed here includes the hourly Total Infused (amount), the number of Bolus Given (BG) and the number of Bolus Attempted (BA) for up to 24 previous hours. The user can scroll up or down the screen to view the hourly infusion data by using the **UP/DN ARROW** keys.
6. Therapy Information (ThrpyInfo): The information displayed in this screen is from the pre-prescription menu and includes Units (dosing units), Concentration (of the medication), Administration Route and Load Dose.
7. RX Information (RXInfo): This screen provides prescription menu information and includes Basal Rate, Patient Bolus, Bolus Interval, and Number of Bolus per Hour.
8. Percent Bolus (%Bols): This screen provides Bolus Volume as the percentage of Total Volume. TBOL is the total volume infused through bolus, TVOL is the total volume infused, and % BOLS is the percentage of TBOL over TVOL.
9. Clear Shift Total (CLRShft): Two Shift Total screens are displayed for 11 seconds when this key is pressed. This key allows the user to view only or CLEAR the Shift Totals. TO CLEAR SHIFT TOTALS: Press the **CLR Shft (#9)** key. Record needed information (amount inf, volume inf, clin doses, boluses given of boluses attempted). Then press the **YES/ENTER** key while "CLEAR" is displayed on the screen. If "CLEAR" is not displayed on the screen, the key has timed out and returned to the Infusion Running Screen. Press CLR Shft key again and press **YES**. Press the **CLR Shft** key one last time to verify that the values are reset or cleared and the Elapsed Time reset to 1 minute.
0. Check Maximum Infusion (ChckMax): The information displayed here is the maximum (rate or amount) that can be infused hypothetically, given the prescription parameters. This "Maximum Infusion per Hour" serves as a "sanity check" after the pump has begun infusing.

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# CLINICIAN INSTRUCTIONS



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TROUBLESHOOTING

## TROUBLESHOOTING:

NOTE: For all alarms except "INFUSION COMPLETE", follow these instructions before proceeding to the RESOLUTION section below: To silence and exit Alarm/Alert screens, press the **PAUSE** key, press **YES** to RESUME, then resolve the alarm. When ready to resume the infusion, press **RUN** to start the infusion.

### LCD DISPLAY/RESOLUTION/POSSIBLE CAUSES

- INFUSION COMPLETE** Press **PAUSE**, attach new solution container, highlight REPEAT RX and press **YES**. The program will auto-scroll (or confirm each field by pressing **YES**). If therapy is complete, turn pump off.
- AIR-IN-LINE** Press the **PRIME** key, then follow on-screen instructions to remove air from the tubing and IV bag. CAUTION: Disconnect set from patient's access site before priming. Sets with in-line ASVs must be primed on the pump.
- ALARM DOWN OCCLUSION** Down occlusions auto-correct when occlusion is resolved without the need to press **PAUSE**. Check the tubing from pump to patient's IV site for cause, then correct obstruction per protocol. Consider changing the DN Occlu setting from LOW to HIGH (See OPTIONS section). Possible causes: kinked or clamped line, infiltrated/positional IV site, viscous solution, small gauge catheter.
- ALARM UP OCCLUSION** Check tubing from pump to IV bag for cause, then correct obstruction per protocol. Possible causes: glass container without vented spike adapter, line kinked in pump door, bag empty, bag not spiked properly.
- ALARM HIGH UP PRESSURE** Check for excessive pressure on IV bag. Causes: uneven fluid distribution within lockbox or carrying pouch, object pressing on solution container.
- ALARM SET NOT INSTALLED** Use only Curlin administration sets. Check that set is installed properly. Refer to Instructions for Use in set package or Installing Administration Set section in this guide. Possible causes: tab not removed from yellow Flow-Stop, blue guide pin or yellow flow-stop not properly seated in receptacles, no set installed.
- ALARM UNATTENDED** The pump will alarm when left idle for 2 minutes. Press **RUN** to start the infusion or press **OFF** to power down the pump.
- ALARM REPLACE SET 3** Replace set and prime if necessary. Possible causes: flattening of the soft pumping segment of the set due to overuse, use of a glass container without a vented spike adapter, excessive plunger stiction with syringe use.
- ALARM REPLACE SET 4** Equalize the pressure in the set by priming (disconnect from the patient). Turn pump OFF then ON to reset the sensor prior to resuming the infusion.
- ALARM DOOR OPEN** Check placement of the administration set and close pump door properly. See User's Manual for instructions.
- ALARM EMPTY BATTERY** Turn pump off by pressing the **OFF** key. Install 2 new batteries and turn pump back on.
- ERROR CODE** If an error code occurs, turn pump off and consult provider or manufacturer.

