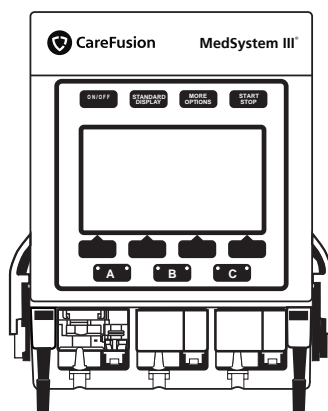


# MedSystem III® infusion pump

## QUICK REFERENCE GUIDE



### WARNINGS

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To ensure proper operation of the MedSystem III® infusion pump, the user must be familiar with related features, setup, programming, and IV sets and accessories prior to use.

This guide is not intended to be comprehensive instructions for the setup and operation of the MedSystem III® infusion pump. For complete instructions along with Warnings and Cautions, refer to the MedSystem III® infusion pump Directions for Use.



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### To Prime the Administration Set

1. Use only MedSystem III® administration sets.
2. Close roller clamp. Spike container. Fill drip chamber to approximately half full.
3. Confirm that vent is in the correct position.
4. With cassette inverted, prime set **slowly**. Use a syringe to aspirate air from SmartSite® needle-free valve. Massage pressure dome to expel all air.

### To Insert the Cassette

*Note: Pump must be turned ON prior to cassette loading. Slide clamp must be in the fully closed (out) position.*

1. With tubing downward, insert cassette upward and in at a 45° angle.
2. Press the slide clamp in until flush with the cassette.
3. Gently pull tubing collar down and press it into the recess below the cassette.
4. Three "beeps" indicate proper placement.

### To Set Up a Primary Infusion

1. Select channel by pressing "**A, B** or **C**".
2. Press **SELECT** to highlight the value you wish to program (Rate or Volume Remaining or to clear the Volume Infused.)
3. Use ↑, ↓, Fast ↑, or Fast ↓ to reach the desired value, then press **ENTER**. The highlight bar will automatically move to the next field.

*Note: The direction of the "Fast" key can be changed by pressing the corresponding ↑ or ↓ arrow.*

4. To recall a setting before Enter is pressed, press **MORE OPTIONS** then **RECALL**.
5. Press **START/STOP** to begin or stop infusion.
6. VERIFY:
  - flow of solution from the primary solution container
  - settings on the standard display are correct
  - Infusion Status "Infusing" on the selected

channel.

### To Change Rate or VTBI

1. Select channel by pressing "**A, B** or **C**".
2. Change the rate using ↑, ↓, Fast ↑, or Fast ↓ to reach the desired value, then press **ENTER**.
3. Or press **SELECT** to move to the Volume Remaining field. Change the VR using ↑, ↓, Fast ↑, or Fast ↓ to reach the desired value, then press **ENTER**.

*Note: Infusion does not stop during changes. New rate is in effect immediately upon pressing the Enter key.*

### To Clear the Volume Infused

1. Select Channel by pressing "**A, B**, or **C**".
2. Press **SELECT** to move to the Volume Infused (VI) field.
3. Press **CLEAR** to reset to zero. Press **ENTER**.

*Note: Information does not clear from the Total Volume page.*

### OR

1. Press **MORE OPTIONS**, then **TOTVOL**. Total Volume page appears.
2. Press **CLRTOT**. All values for each channel will clear and flash. Press **ENTER**.

*Note: Information will be cleared from all channel pages, A, B, and C.*

### To Stop a Channel

#### Temporarily - "Stopped" Status

1. Select channel by pressing "**A, B** or **C**".
2. Press "**START/STOP**".
3. Verify Infusion status "Stopped" on the selected channel. If cassette remains in the channel, a "CHANNEL NOT IN USE" advisory will sound in two minutes.

*Note: In the OR Device Modes, there is no "Stopped" option, and "Standby" mode is reached directly when "STOP/START" is pressed.*

### Indefinitely - "Standby" Status

1. Select channel by pressing "A, B or C".
2. Press **START/STOP**. Press **STANDARD DISPLAY**.
3. Press **STNDBY**.
4. Verify Infusion status "Standby" on the selected channel. No advisory will sound.

### To Clear the Standard Display for channel(s) Not in Use

1. Remove cassette from channel.
2. Ensure the highlight bar is on an active channel. (To move the highlight bar, select any infusing channel by pressing A, B, or C as appropriate.) The information for the channel not in use will disappear from the STANDARD DISPLAY within 2 minutes.

### To Start an Infusion Following Infusion Complete (KVO Status)

1. Select channel by pressing "A, B or C".
2. Press the **CHANNEL** key again, press **REPEAT** to restore previous settings, then press **ENTER**, OR set new values then press **ENTER**.
3. Press **START/STOP**.

### To Set Up Secondary (Piggyback) Infusion

1. Use a primary set with a check valve.
2. Hang the primary container at least 8 inches below the secondary container.
3. Attach the secondary set to the upper "Y" site of the primary set.

#### WARNING:

Setting a secondary rate over 275 ml/hr may result in concurrent flow with the primary container.

### To Program a Secondary Infusion:

1. Select channel by pressing "A, B or C".
2. Press **MORE OPTIONS**, then "2° SEC". The secondary programming page will appear. Note that the secondary page is reverse highlighted.

3. Press **SELECT** to highlight the value you wish to program (Rate or Volume Remaining or to clear the Volume Infused.)
4. Use ↑, ↓, Fast ↑, or Fast ↓ to reach the desired value, then press **ENTER**. The highlight bar will automatically move to the next field. (Note: the direction of the "Fast" key can be changed by pressing the corresponding ↑ or ↓ arrow.)
5. To recall a setting before "Enter" is pressed, press **MORE OPTIONS** then **RECALL**.
6. Open secondary roller clamp then press **START/STOP** while on the secondary page to begin secondary infusion.
7. VERIFY:
  - flow of solution from the secondary container
  - settings on the standard display are correct
  - Infusion Status "Infusing" on the selected channel
8. When the VR on the secondary infusion reaches zero, the primary rate automatically resumes.

#### WARNING:

Failure to enter a correct Secondary Volume Remaining may result in the secondary solution being administered at an incorrect rate. The fluid in the secondary set stops flowing when it reaches the level of the fluid in the primary container.

### To Interrupt a Secondary and Return to Primary Infusion

1. Select channel by pressing "A, B or C".
2. Press **MORE OPTIONS**, then "1° PRI" to access Primary programming page.
3. Close the secondary roller clamp and press **START/STOP**. The primary infusion will begin.

### To Turn Pump Off

1. Hold the **ON/OFF** key in for one full second.

## ADVANCED FEATURES

### To Program a Dose Rate Calculation

*Note: Infusion must be stopped before accessing the Dose Rate Calculation feature to enter a new program or to change Drug Name, Patient Weight or Drug Concentration values.*

1. Select channel by pressing "**A**, **B** or **C**".
2. Press **MORE OPTIONS**, then press **CALCON**. Drug? will be highlighted.
3. Press **SELECT** to program values for Drug? (to customize any dosing parameters)

#### OR

4. Choose a specific drug name by pressing ↑ or ↓, and scrolling through the list.
5. Press **ENTER** to select the desired drug name.
6. Press **SELECT** to highlight the value you wish to program (Weight, Concentration, Dose, Rate, Volume Remaining or to clear the Volume Infused and Dose Infused.)
7. Use ↑, ↓, Fast ↑, or Fast ↓ to reach the desired value, then press **ENTER**. The highlight bar will automatically move to the next field.

*Note: The direction of the "Fast" key can be changed by pressing the corresponding ↑ or ↓ arrow.*

8. To recall a setting before Enter is pressed, press **MORE OPTIONS** then **RECALL**.

*Note: If Dose is entered, Rate will automatically be calculated. If Rate is entered, Dose will automatically be calculated.*

9. Press **START/STOP** to begin or stop infusion.
10. VERIFY:
  - flow of solution from the primary solution container
  - settings on the standard display are correct
  - Infusion Status "Infusing" on the selected channel.

### To View Dose Rate Program

#### Parameters

1. Select channel by pressing "**A**, **B** or **C**". Dose Rate Calculation programming page will display.

To Change Dose or Rate (Titrate During Infusion)

1. Select Channel by pressing **A**, **B**, or **C**. Dose will be highlighted.
2. Use ↑, ↓, Fast ↑, or Fast ↓ to reach the desired dose value then press **ENTER**.

#### OR

1. Press **SELECT** to highlight Rate. Use ↑, ↓, Fast ↑, or Fast ↓ to reach the desired rate value then press **ENTER**.

### To Change Weight or Concentration

1. Select Channel by pressing **A**, **B**, or **C**.
2. Press **START/STOP**.
3. Press **SELECT** to highlight the value you wish to change. (Weight or Concentration)
4. Use ↑, ↓, Fast ↑, or Fast ↓ to reach the desired value then press **ENTER**.
5. Press **START/STOP** to restart the infusion.

### To Exit Dose Rate Calculator

1. Select Channel by pressing **A**, **B**, or **C**.
2. Press **START/STOP**.
3. Press **MORE OPTIONS**, then **CALCOFF**.

## ALARM RESPONSE

### Advisory

Two beeps will accompany advisory description message on STANDARD DISPLAY.

Red LED on the affected channel will flash.

1. Press **QUIET** to silence.
2. Press the alarming channel, **A**, **B**, or **C**, to access alarm information and follow the instructions.

### Alarm

Four quick beeps will accompany an alarm description message on the STANDARD DISPLAY.

Red LED on the affected channel will flash.

1. Press **QUIET** to silence.
2. Press the alarming channel, **A**, **B**, or **C**, to access alarm information and follow the instructions.

### "WatchDog"

Continuous audible tone sounds to alert the user that safety checks built into the software have detected a situation which may be transient in nature. (For example a power surge may trigger WatchDog.)

Screen will be blank. All Green and Red LEDs will flash.

Press and hold the **ON/OFF** key in for one full second to turn instrument off.

All current settings will be retained in memory.

Turn pump back on and restart infusion(s) by selecting the channel(s) and then pressing **START/STOP**.

### Fault

European "police siren" alarm will sound to alert the user that a fault condition exists. **A fault may be a transient, correctable situation. See examples under "Troubleshooting".**

Fault description message appears on the

STANDARD DISPLAY.

Red LED on the affected channel will flash.

1. Press **QUIET** to silence.
2. Press the alarming channel, **A**, **B**, or **C**, to access alarm information and follow the instructions.
3. Clear fault by pressing **RETRY** if available.

The option exists to disable the channel by pressing **SERVICE**. The remaining two channels would still be available for use, but the instrument will eventually need to be serviced. **DO NOT PRESS SERVICE UNLESS YOU HAVE EXHAUSTED OTHER MEANS OF CLEARING THE FAULT AND YOU WISH TO DISABLE THE CHANNEL.**

## TROUBLESHOOTING

### Pumping Latch Closed

Fault message indicates that the pumping latch jaw, next to the air sensor, is in the closed position. The latch **MUST** be opened so that it is able to accept a cassette. No **RETRY** option exists because resolution of this condition requires manually opening the latch jaw.

1. Press the alarming channel, **A**, **B**, or **C**, to access alarm information and follow the instructions.
2. **DO NOT PRESS SERVICE** unless you wish to disable the channel.
3. Using your finger, push down the pumping latch jaw until it snaps open.
4. If the latch will not open or the lower jaw is visibly broken, the channel may be disabled by pressing **SERVICE**. The remaining two channels will be unaffected and may still be used. Contact your service personnel to repair the pump.

**CAUTION:** Never use a blunt instrument to open a closed pumping latch.

### CHECK FLUID SIDE

Alarm indicates that flow is restricted upstream (pump to container).

1. Press the alarming channel, **A**, **B**, or **C**, to access alarm information and follow the instructions.
2. Check for any upstream obstruction to flow such as closed roller clamp, kinked tubing, empty syringe or burette, or closed air vent.
3. Correct the obstruction if found.
4. If none found, press **CONFIRM**.
5. Press **START/STOP** to restart the infusion.

### AIR-IN-LINE

Alarm indicates that air has been detected by the Air Sensor.

1. Press the alarming channel, **A**, **B**, or **C**, to access alarm information and follow the instructions.
2. If clinically appropriate, press **CLRAIR** to clear small amount of air from the tubing (0.2 ml/pulse, maximum 5 pulses per alarm; TOTAL = 1 ml).
3. 3 beeps indicates that the air has passed the Air Sensor.
4. Press **START/STOP** to restart the infusion.

