

## QUICK REFERENCE GUIDE

Alaris™ PC unit (PC unit) and Alaris™ Pump module (Pump module)

### WARNINGS:



- To ensure proper operation of the Alaris™ System, you must be familiar with related features, setup, programming, and IV sets and accessories.
- This guide is not intended to be comprehensive instructions for the setup and operation of the Alaris™ System. For complete instructions, along with Warnings and Cautions, refer to the Alaris™ System User Manual (v9).

### Programming an Infusion Using Guardrails™ Suite MX Protection

#### Using Guardrails™ drug library:

1. Press **CHANNEL SELECT** key.
  2. Press **Guardrails Drugs** soft key.
  3. Press soft key next to desired drug.
    - An optional hospital-defined therapy or clinical indication for delivery of this infusion might appear.
    - A weight-based, non-weight-based, or BSA-based option for delivery of this infusion might appear.
    - Multiple concentration listings for delivery of this infusion might appear.
  4. Confirm selected drug and concentration.
5. Enter patient weight or BSA if required. If setup is correct, press **NEXT** soft key.
  6. Press either **RATE** or **DOSE** soft key and enter desired value. This value may be pre-populated and edited if appropriate.
- OR**
- Press **DURATION** soft key and enter desired value. This value may be pre-populated and edited if appropriate. To enter rate, press **RATE VOLUME** soft key and enter infusion rate.



**Using Guardrails™ drug library:**  
(Continued)

7. Press **VTBI** soft key and enter desired VTBI. VTBI may be pre-populated and value edited if appropriate.
8. Press **START** soft key.

**Bolus Dose:**

The bolus option appears on the Continuous Infusion page when a VTBI is entered.

1. Press **BOLUS** soft key.
2. Use numeric keys to enter desired bolus dose. This value may be pre-populated and edited if appropriate. If applicable, enter patient weight.
3. Press **DURATION** soft key and use numeric data entry keys to enter duration—this value may be pre-populated and edited if appropriate—or press **Rapid Bolus** soft key.

If **Rapid Bolus** is selected, the bolus dose is delivered at the hospital-established fastest rate for that specific drug.

4. Press **START** soft key to begin bolus infusion.
5. During any bolus infusion, press **CHANNEL SELECT** key to see detail screen.

**Using Guardrails™ IV fluids:**

1. Press **CHANNEL SELECT** key.

2. Press **Guardrails™ IV Fluid** soft key.
3. Press soft key next to desired fluid.
4. Confirm selected fluid.
5. Press **RATE** soft key and enter rate.
6. Press **VTBI** soft key and enter desired VTBI.
7. Press **START** soft key.

**Secondary Piggyback Infusion Using Guardrails™ drug library:**

1. Program primary infusion.
2. Press **CHANNEL SELECT** key.
3. Press **SECONDARY** soft key.
4. Press soft key next to desired drug.
5. Confirm selected drug and concentration.
6. Enter patient weight or BSA if required. If setup is correct, press **NEXT** soft key.
7. Press **DURATION** soft key and enter desired value. To enter rate, press **RATE VOLUME** soft key.
8. VTBI pre-populates with diluent volume. To edit, press **VTBI** soft key and enter desired VTBI.  
“Verify secondary clamp is open, then press START” prompt appears.
9. Open clamp on secondary set.

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**WARNING:**



If the secondary clamp is not open, the fluid is delivered from the primary container.

10. Press **START** soft key.

When an infusion is started outside of a Guardrails™ limit, a **G** icon displays. To view Guardrails™ limit information, press soft key next to **G** icon.

11. Verify that drops are falling from the secondary drip chamber.

**Programming an Infusion Without Guardrails™ Suite MX Protection**

**Drug Calculation:**

1. Press **CHANNEL SELECT** key.
2. Press **Guardrails™ Drugs** soft key.
3. Press **DRUG CALC** soft key.
4. Enter amount of drug in fluid container.
5. Press drug-specific unit-of-measure soft key.
6. Enter diluent volume.
7. Press **PATIENT WEIGHT** soft key.
8. Press **Yes** or **No** soft key to indicate whether or not patient weight is to be used in drug calculation.
9. If applicable, enter patient weight.



10. Press **TIME UNITS** soft key. Press **Min**, **Hour**, or **Day** soft key to select appropriate time measurement.
11. Press appropriate **DOSING UNITS** soft key.
12. Press **NEXT** soft key to confirm parameters.
13. Press either **RATE** or **DOSE** soft key and enter desired value.
14. Press **VTBI** soft key and enter VTBI.
15. Press **START** soft key.

**Basic Infusion:**

1. Press **CHANNEL SELECT** key.
2. Press **Basic Infusion** soft key.
3. Press **RATE** soft key and enter rate.  
To enter duration press **VOLUME DURATION** soft key and enter duration value.
4. Press **VTBI** soft key and enter desired VTBI.
5. Press **START** soft key.

**Secondary Piggyback Infusion:**

1. Program primary infusion.
2. Press **CHANNEL SELECT** key.
3. Press **SECONDARY** soft key.
4. Press **BASIC SECONDARY** soft key.
5. Press **RATE** soft key and enter desired rate.



### Secondary Piggyback Infusion: (Continued)

- Press **VTBI** soft key and enter desired VTBI.  
“Verify secondary clamp is open, then press **START**” prompt appears.
- Open clamp on secondary set.

#### **WARNING:**



If the secondary clamp is not open, the fluid is delivered from the primary container.

- Press **START** soft key.
- Verify that drops are falling from the secondary drip chamber.

### Restarting an Infusion Following an Infusion Complete - KVO

- Press **CHANNEL SELECT** key.
- Press **Restore** soft key to restore previous VTBI or press **VTBI** soft key to enter a new VTBI.
- Press **START** soft key.

### Channel Labels

#### Labeling a channel and then programming an infusion:

- Press **CHANNEL SELECT** key.
- Press **Basic Infusion** soft key.
- Press **OPTIONS** key.
- Press **Channel Labels** soft key.
- Press soft key next to applicable channel label.

- Program infusion.

### Pressure Monitoring—Changing Selectable Pressure

This option is not available on an Alaris™ Syringe module.

- Press **CHANNEL SELECT** key.
- Press **OPTIONS** key.
- Press **Pressure Limit** soft key.
- Press **Selectable** soft key.
- Press either **Up** or **Down** soft key to increase/decrease occlusion pressure threshold.
- Press **CONFIRM** soft key.
- Press **START** soft key.

### Powering Down

To power down individual channels, press and hold **CHANNEL OFF** key for approximately 1.5 seconds, until a beep is heard.

### System Error

If an error is detected on the PC unit, operation continues on all channels. When appropriate for the patient, power down the system and replace the PC unit with an operational instrument. Service by qualified personnel is required.

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## Loading and Removing Administration Set

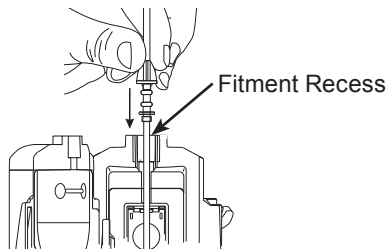
### WARNINGS:



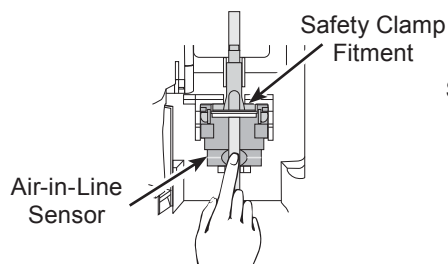
- **To prevent free-flow**, close the set roller clamp when the safety clamp fitment is open.
- **Do not touch** the set tubing or upper fitment while closing the door. Failure to follow this instruction can result in infusion rate inaccuracy.

### Loading:

1. Lower and position upper fitment into fitment recess.



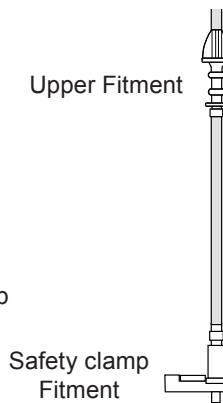
2. Press Safety Clamp fitment into recess in Pump module.



3. Firmly press tubing into Air-in-Line Sensor.

### Removing:

1. Close roller clamp.
2. Open Pump module door and gently pull tubing below Air-in-Line Sensor forward and out to remove Safety Clamp fitment.
3. Lift upper fitment vertically from upper fitment recess.



## Troubleshooting

### Alarms—Pump Module

Alarm	Meaning	Response
Accumulated Air-in-Line	A large number of air bubbles smaller than current air-in-line limit has recently passed detector.	Clear air from line. To continue infusion, press <b>RESET</b> soft key and then <b>RESTART</b> key.
Air-in-Line	Air has been detected in administration set during an infusion. Infusion stops on affected module.	Ensure that tubing is properly installed in Air-in-Line Detector. If air is present, clear air from administration set. Press <b>RESTART</b> key, or press <b>CHANNEL SELECT</b> key and then <b>START</b> soft key.
Channel Disconnected	Module disconnected while in operation or have a communication problem.	To silence alarm and clear message from screen, press <b>CONFIRM</b> soft key. Reattach module if desired, ensuring it is securely "clicked" into place at Module Release Latch. If alarm is still present, replace module.
Check IV Set	Administration set is not properly installed. Infusion stops on affected module.	Close roller clamp, remove and reinstall administration set, close door, open roller clamp, and then press <b>RESTART</b> key.
Checking Line	Patient-side occlusion occurred; Auto-Restart feature monitoring downstream pressure to determine if infusion can continue.	None
Close Door	Door opened during an infusion. Infusion stops on affected module.	Close door. Press <b>RESTART</b> key, or press <b>CHANNEL SELECT</b> key and then <b>START</b> soft key.

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### Alarms—Pump Module (Continued)

Alarm	Meaning	Response
Occluded - Fluid Side/Empty Container	Indicates either upstream occlusion or empty container. Infusion stops on affected module.	Clear occlusion on fluid side of instrument. If necessary, refill drip chamber. Press <b>RESTART</b> key, or press <b>CHANNEL SELECT</b> key and then <b>START</b> soft key.
Occluded - Patient Side	Increased back pressure sensed while infusing in pump delivery mode. Infusion stops on affected module.	Clear occlusion. Press <b>RESTART</b> key, or press <b>CHANNEL SELECT</b> key and then <b>START</b> soft key.
Partial Occlusion - Patient Side	Partial occlusion of patient side of IV line detected by Auto-Restart feature.	Clear occlusion. Press <b>RESTART</b> key, or press <b>CHANNEL SELECT</b> key and then <b>START</b> soft key.
Pump Chamber Blocked	Tubing blocked inside Pump module (in pump chamber).	<ol style="list-style-type: none"> <li>1. Close roller clamp and open door.</li> <li>2. Remove tubing.</li> <li>3. Massage tubing from top to bottom to restore flow.</li> <li>4. Reload set and close door.</li> <li>5. Press <b>NEXT</b> soft key.</li> <li>6. Press <b>CONFIRM</b> soft key.</li> <li>7. Open roller clamp and press <b>RESTART</b> key.</li> <li>8. Verify flow in drip chamber after restarting infusion.</li> <li>9. Change set if not able to establish flow.</li> </ol>

**Troubleshooting (Continued)**

**Alarms—Pump Module (Continued)**

Alarm	Meaning	Response
Restart Channel	Door opened and closed during an infusion. Infusion stops on affected module.  Module paused for 2 minutes.	Close door. Press <b>RESTART</b> key, or press <b>CHANNEL SELECT</b> key and then <b>START</b> soft key.  Press <b>RESTART</b> key, or press <b>CHANNEL SELECT</b> key and then <b>START</b> soft key.
Safety Clamp Open - Close Door	Safety clamp device is in open position while door is open.	Close roller clamp on administration set or close door.

**Errors—PC Unit**

Error	Meaning	Response
Hardware Detected Error	Error detected on PC unit. Operation stops on all modules.	Replace PC unit.
System Error	Error detected on PC unit. Operation continues on all attached modules.	To continue temporary operation, press <b>SILENCE</b> key. Replace PC unit.

**Errors—Pump Module**

Error	Meaning	Response
Channel Error	Error detected. Operation stops on affected module.	To silence alarm and continue operation of unaffected module(s), press <b>CONFIRM</b> soft key. Replace module, as needed.