B|BRAUN
SHARING EXPERTISE

Space® 2nd GENERATION INFUSION PUMP LEARNING MODULE

Infusomat® Space® 2nd Generation Infusion Pump & Perfusor® Space® 2nd Generation Syringe Pump

We're committed to providing efficient, effective, and evidence-based product training, clinical best practices education, and clinical consulting services focused on improving patient care.

Classroom and Simulation-Based Learning

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CCMB & CCP Adult Workbook

Disclaimer

This workbook is designed for the purpose of hands on simulated based training under the guidance of a B Braun Clinical Educator(s) in a simulated environment only.

This workbook is NOT designed or intended to be used as an instructional manual, quick reference guide or how to program the pump. For complete instructions please refer to the B Braun Quick Reference Guides or Instructions for use.

This workbook does NOT contain any hospital policies or procedures that should be used in real practice. All scenarios in this workbook are designed for simulation based training only. Hospital policies and procedures should be referred to when practicing in any clinical area.

These scenarios should be considered for practices purposes only and may not reflect actual clinical practice(s).

Goal: Load IV Tubing

Load the IV tubing into your pump
Prime the line
Arrive at the following landing screen:

Attempt to accomplish this goal on your own
Advance to the next Goal when complete

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

1. If the pump is powered off, press to power on the pump.

2. Press to load the IV tubing.

3. Press to answer “Yes” to “Opening door, IV line clamped?”

4. Locate flashing yellow triangle.

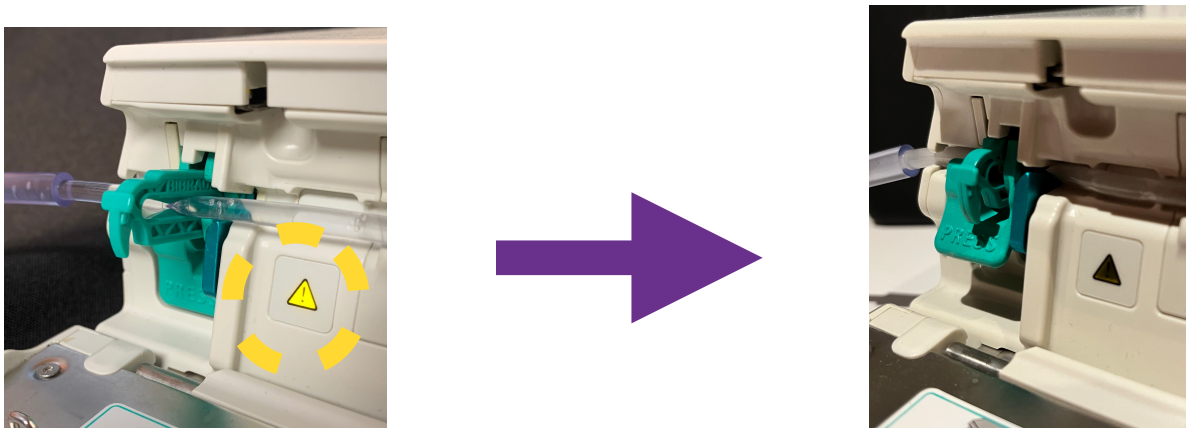
If the triangle is not flashing, press the green lever until it is fully engaged

5. Hold the IV tubing with the 2-hole clip in your right hand, and the free-flow protection clip in your left hand.

6. Place the 2-hole clip on the 2 pins on the right side of the pump.

7. Insert the white clip into place.

8. Take the free-flow protection clip with the hook facing down and toward you, insert it into the green slot. The clip is properly inserted when the light stops flashing.



9. Thread the IV set into the notches on the right and left side of the pump.
10. Always run your finger along the IV set to secure it into the track.
11. Close the door firmly until you hear and feel the motorized door pulled shut.
12. Prime the line with the pump by answering “Yes” to prime. Acknowledge on screen safety prompt.

13. Press OK to stop priming early or to confirm that priming is complete.
14. Answer "No" to prompt "Repeat priming?"

Congratulations, You loaded and Primed your set!

Please advance to the next goal

Goal: Program and start a PRIMary Infusion

1: Program a continuous infusion of:

Care Unit:	ADULT Oncology
Category:	All Drugs
Medication Selection:	*IV fluids (D5W, 0.9% NS)
Initial Infusion Rate:	50 ml/hr
VTBI (Volume To Be Infused):	500 ml

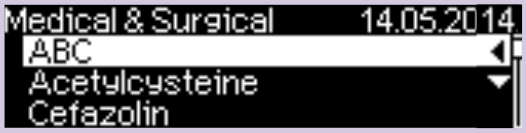
and Start the infusion

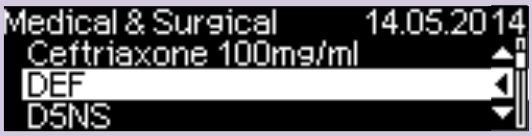
2: While Your Infusion Is Running…

Change the rate to	80 ml/hr

? Did You Know That…

Use the right arrow to jump to the next alphabet grouping (“ABC,” “DEF,” “GHI,” etc.) to find your entry faster!





Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

Goal 1: Program and start a continuous infusion

Starting at this Screen:

1. Follow prompts to program an infusion.
2. Select the applicable Care Unit

ADULT Oncology

3. Select the Category

All Drugs

4. Select the medication entry from the drug library **When there is an Asterix next to the drug name, you will find it at the top of the drug list*

*IV fluids (D5W, 0.9% NS)

5. Enter a rate of

50 ml/hr

6. Enter VTBI (Volume to be infused) of

500 ml

7. When the "START" icon has appeared in the upper right corner of the screen, press 

.

Congratulations, your infusion is running!

Goal 2: While Your Infusion Is Running…

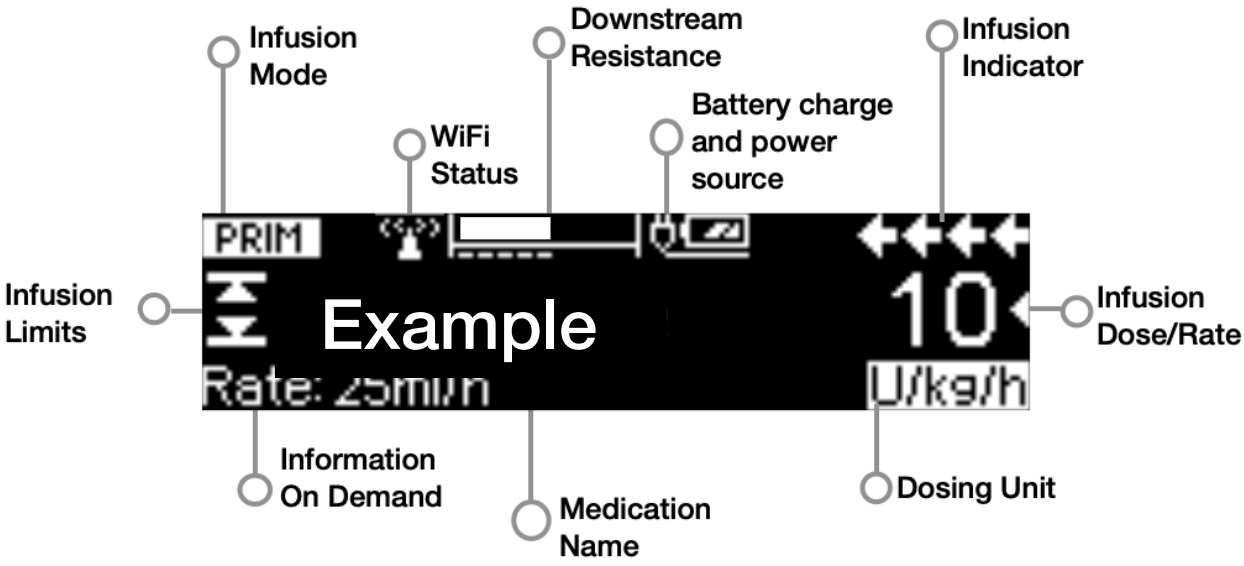
1. While the pump is running, press  and change the values to

80 ml/hr

Confirm the rate change

Congratulations, you titrated your infusion!

Getting to know your pump screen



Did You Know That…

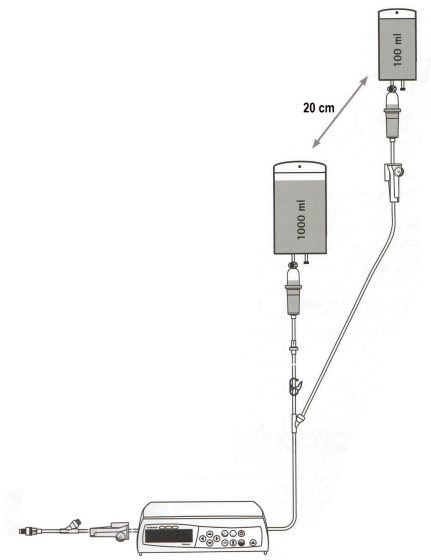
By pushing the Up or Down arrows while on your main running screen you can change the information displayed in the bottom left-hand corner on the screen?

Goal: Program a SECondary Infusion

1: With the existing PRIMary infusion, now program a SECondary infusion of

Medication Selection:	ondansetron
Concentration	8mg/62ml
Total Dose to be infused	8 mg
Total Time of Infusion	15 minutes.

SECondary setup



! IMPORTANT TO REMEMBER

- Connect the SECondary tubing to the port above the pump

-Ensure PRIMary line is clamped before staring SECondary infusion

2: While infusing change the Time of Infusion to

20 minutes.

Attempt to accomplish this goal on your own

OR

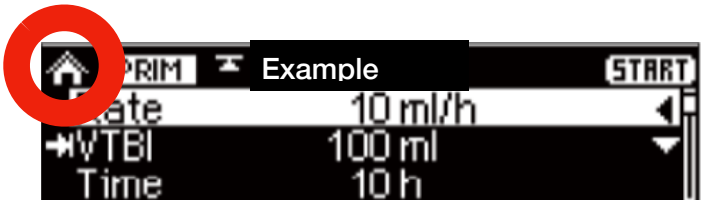
Advance to the next page for step by step instructions.

Step by Step Instructions

Goal 1: With a PRIMary Infusion running, Program a SECondary infusion of

Starting from the infusion screen:

1. Press Start Stop to stop the PRIMary infusion and bring up the Home Screen.



2. From the Home Screen, scroll down to locate and select “SECondary”.

3. Select “New SECondary” from the sub-menu.

4. Select the medication ***To find your entry faster, Use the right arrow to jump to the next alphabet grouping (“ABC”, “DEF”, "GHI", etc).***

ondansetron

from the drug library.

5. Select the concentration

8mg/62ml

6. Enter “TOT (Total) dose” of

8 mg

Ensure PRIMary line is clamped before starting SECondary infusion

7. Review all entries and confirm that “START” icon is present in the upper right corner of the screen.

8. Start the “SECondary” infusion.

9. Acknowledge on-screen safety prompt and ensure your “SECondary” infusion is running.

Congratulations, your secondary is infusing!

Goal 2: Change The Time Of Infusion Of Your Secondary

1. Press  to change the time of the infusion to

20 minutes.

and confirm the entry. Note the rate change in the bottom left corner.

Congratulations, you titrated your infusion!

SECondary Infusion Programming

1. Your pumps are programmed to: Automatically return to the primary infusion when the secondary infusion is complete.

2. The “Back to PRIM” sub-menu under SECondary determines how the pump will switch back to PRIMary.

- “Automatic” converts to the PRIMary automatically when the SECondary is complete.
- “Manual” enters KVO mode with an alarm when the SECondary is complete.

Goal: Identify the Infusion Safety Limits

CONTINUE THE CURRENT INFUSION

Goal: Identify the Infusion Safety Limits

Soft and hard limits have been established by your facility

A soft limit ***can*** be overridden. Titrate your time of infusion to

40 minutes.

Identify the Soft Limits and override.

A hard limit ***cannot*** be overridden. Try to titrate your time of infusion to

10 minutes.

Identify the hard limit alert and correct the infusion to

15 minutes.

Attempt to accomplish this goal on your own
OR
Advance to the next page for step by step instructions.

Did You Know That…

Indicates you are between the the soft safety limits

Indicates you are above the the soft safety limit

Indicates you are below the the soft safety limit

Step By Step Instructions

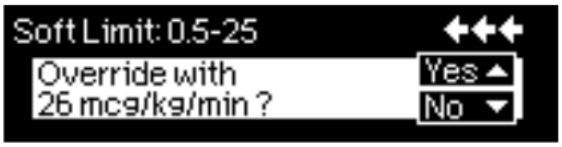
CONTINUE THE CURRENT INFUSION

Goal: Identify Infusion Safety Limits

Soft and hard limits have been established by your facility

1. A soft limit ***can*** be overridden. Press ◀ to titrate the time of infusion to 40 minutes. and confirm new doserate. The pump provides a soft limit alert.

NOTE: The alert has the drug library limits shown in the upper display as well as the value being attempted



2. Answer “Yes” to override soft limit and deliver the programmed dose.
3. A hard limit ***cannot*** be overridden. Try to titrate the time of infusion to 10 minutes. The pump provides a hard limit alert.
4. A drug library hard limit upper limit has been reached. Acknowledge the alert.

NOTE: When a hard limit has been reached, the pump editor will revert back to last confirmed programmed value.

5. Change the time of infusion back to 15 minutes. and confirm.

Congratulations, you found the soft and hard limits!

Goal: Explore the SubMenus

CONTINUE THE CURRENT INFUSION

Goal: Clear infused totals

Without interrupting the infusion, clear the infused totals.

Volumes infused are recorded in the "Infused Totals" menu, you can view how much volume the patient received and reset to zero when needed.

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Step by Step Instructions

CONTINUE THE CURRENT INFUSION

Goal: Clear infused totals

1. Without interrupting your infusion, press  to return to the Home Screen.
2. Scroll down and select “Infused Totals”.
3. Highlight “Total” and press  .
4. Answer "Yes" to "Reset to zero?".

Congratulations, you cleared the infused totals!

? Did You Know That…

The pump will retain the volume infused until you clear it or power down the device.

CONTINUE THE CURRENT INFUSION

Goal: Learn how to change the VTBI

Simulate a bag change and reset the VTBI of your infusion to

60 ml

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

? Did You Know That…

The  key has multiple functions. It can be used to reset a number to zero, backup to a previous screen, and clear your infusion to return to the landing page.

Step by Step Instructions

Goal: Change the VTBI

1. Press 

to stop infusion.
2. Scroll down and select “ VTBI”.
3. Press 

to clear current value.
4. Enter a new VTBI of

60 ml

and confirm the entry.
5. Restart the infusion.

Congratulations, you changed the VTBI

? Did You Know That…

When the VTBI is complete, your pump will enter into KVO mode.

The KVO rate will never be faster than the programmed infusion rate and will be based on your facility preferences.

CONTINUE THE CURRENT INFUSION

Goal: Resolve a downstream occlusion alarm

While the pump is infusing, pinch the tubing to trigger an occlusion alarm. Resolve the occlusion, and restart your infusion.

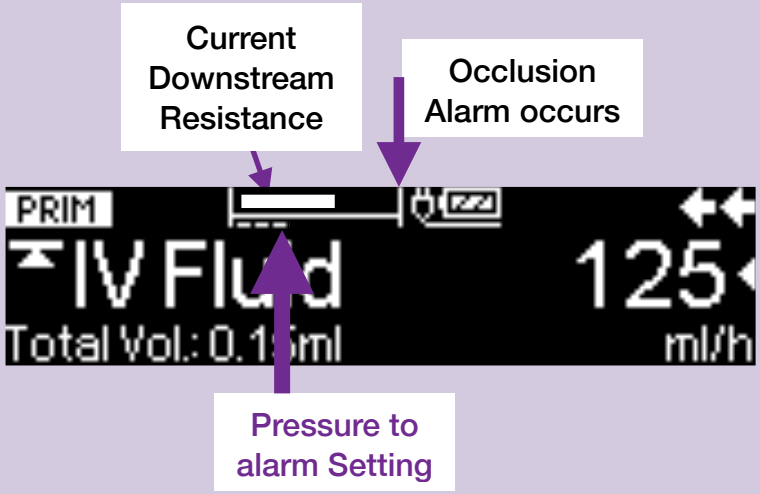
The pump will measure how much resistance is in the line. When a certain threshold is met, it will alarm and interrupt your infusion. A clinical assessment is required prior to restarting the infusion.

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

Did You Know That…



Causes of Downstream Occlusion Alarms could include:

- Clamped tubing
- Kinked tubing
- Poor IV site patency
- High viscosity fluids
- High infusion rates
- Etc.

Step by Step Instructions

Goal: Resolve a downstream occlusion alarm

1. While the infusion is running, trigger a downstream occlusion alarm by pinching the tubing on the left side of the pump.
2. Acknowledge and silence the alarm.
3. Resolve the cause of the occlusion and restart your infusion.

Congratulations, you managed an alarm!

CONTINUE THE CURRENT INFUSION

Goal: Modify the downstream pressure to alarm setting.

While the pump is infusing, increase the downstream pressure to alarm setting to 7.

Increasing this setting may be necessary when the infusion is running at a fast rate, the IV access may be sluggish, the IV fluid is highly viscous, etc. The higher your downstream pressure setting is, the longer it will take for the pump to alarm when there is an occlusion.

? Did You Know That…

When required, you can adjust the sensitivity to a downstream occlusion alarm.

Goal: Modify the downstream pressure to alarm setting.

Step by Step Instructions

1. While the pump is infusing press  to return to the Home Screen.
2. Scroll up or down in the main menu to find "Options", and then select the "Pressure" setting.
3. Increase the setting to 7 and confirm.

Congratulations, you discovered the Options and Status Submenus!

Goal: Use Data Lock to prevent unwanted tampering

CONTINUE THE CURRENT INFUSION

1: Lock the pump to prevent tampering

Lock Using "Level 2" and Enter your facility's unique data lock code of

2992

This feature is intended to prevent any unauthorized person from manipulating the pump.

2: Turn the lock feature off

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

? Did You Know That…

Data Lock level 1, locks programming except for the Start/Stop and Opening door/tubing change functions.

Data Lock Level 2, locks all programming except the Stop function.

Step by Step Instructions

Goal 1: Lock the pump to prevent tampering

1. Stop the infusion.
2. Navigate to the Options menu.
3. Locate “Data Lock” and select it.
4. Highlight “Level 2” and select it.
5. Enter your Facility’s access code of

   2992

   and confirm.
6. Press  to return to the Home Menu.
7. Press start to begin the infusion, notice the key  symbol will appear next to the current infusion rate on the Run Screen.

Goal 2: Turn the lock feature off

8. Stop the infusion.
9. When prompted, enter your Facility’s access code of

   2992

   and confirm.
10. Navigate to the Options Menu.
11. Locate and select “Data Lock”.
12. Highlight and Select “OFF”.
13. Press  to return to the Home Menu.

Congratulations, you Locked and Unlocked your pump

Goal: Program a SECondary Intermittent Infusion

To be used for drugs that are not listed in the drug library and for the Clinical Trials Unit.

To get to the starting point, **STOP** your infusion and press  to clear the current infusion. Repeat if necessary.

Starting at this Landing Screen:

Step 1: Program a PRIMary infusion of:

Care Unit	ADULT Oncology
Category	All Drugs
Medication	*IV fluids (D5W, 0.9% NS)
Rate	100 ml/hr
VTBI	500 ml

Step 2: Program a SECondary infusion of:

Medication	*intermittent
Rate	200 ml/hr
VTBI	100 ml

Attempt to accomplish this goal on your own
OR
Advance to the next page for step by step instructions.

Step by Step Instructions

To get to the starting point, **STOP** your infusion and press the C key to clear the current infusion. Repeat if necessary.

Starting at this Landing Screen:

1. Follow prompts to program an infusion
2. Select the applicable Care Unit

ADULT Oncology

3. Select the Category

All Drugs

4. Select the medication entry from the drug library **When there is an Asterix next to the drug name, you will find it at the top of the drug list*

*IV fluids (D5W, 0.9% NS)

5. Enter a rate of

100 ml/hr

6. Start the infusion.
7. Stop the infusion to program the SECondary infusion.
8. From the Home Screen, scroll down to locate and select “SECondary”.
9. Select “New SECondary” from the sub-menu.
10. Select the medication

*intermittent

11. Enter a rate of

200 ml/hr

12. Enter a VTBI of

100 ml

Ensure PRIMary line is clamped before starting SECondary infusion

13. Review the entries and Start the “SECondary” infusion.

14. Acknowledge on-screen safety prompt and ensure your “SECondary” infusion is running.

Congratulations, you programmed a SECondary Intermittent infusion!

Goal: Standby and Power Off

1: Put the pump on Standby and modify the time between 1 minute and 24 hours

Standby Mode can be useful to stop the infusion and save the programming. When the Standby time expires, an alarm is triggered prompting the user to address the pump.

2: Power down your pump and get to one of these 2 screens:

or

Attempt to accomplish this goal on your own

OR

Advance to the next page for step by step instructions.

? Did You Know That…

1. The standby time can be programmed from 1 minute to 24 hours.
2. The pump cannot be powered down while the tubing is loaded.

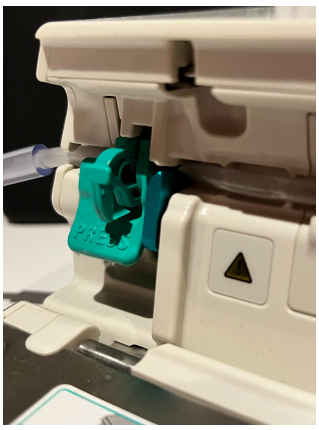
Step By Step Instructions

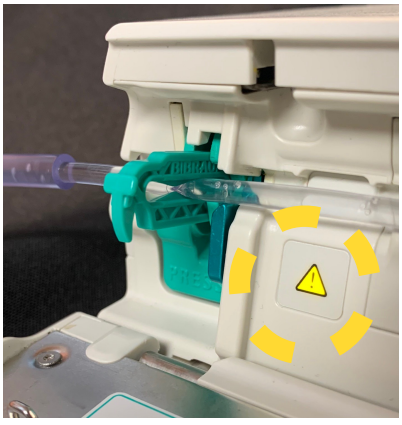
Goal 1: Put the pump on Standby and modify the time between 1 minute and 24 hours

1. Stop your infusion.
2. Press 
3. Answer "Yes" to "Use Standby?"
4. Press  to change timer settings.
5. Press  to clear previous time.
6. Program a Standby time of your choice between 1 minute and 24 hours.
7. Cancel the Standby timer and resume your infusion.

Goal 2: Power off your pump

1. Stop the running infusion.
2. Simulate closing the roller clamp.
3. Press  and confirm the prompt to open door. The door will partially open.
4. Pull the door completely open. You will feel slight resistance as the door pulls the free-flow protection clip to clamp off the tubing.
5. Press the green opening lever on the far left side until the yellow triangle begins flashing and continues to flash.





6. Remove the IV set.
7. Push the door shut firmly.
8. Turn off pump by pressing  for 3 seconds.

Congratulations, you placed your pump in Standby and learned to power it down!

Alarms

Yellow PreAlarms

LED will illuminate, a low alert will sound and the infusion continues to infuse

Can occur when:

- Volume or Time to be infused is near end
- 30 minutes before the battery is depleted
- Keep Vein Open m (KVO) mode has been activated
- A programming sequence has not been completed/confirmed

Red Alarms

LED will illuminate, a high alert will sound and the infusion will stop infusing

Can occur when:

- Upsteam or Downstream pressure threshold has been reached
- Air has been detected in the line
- End of an infusion OR end of KVO mode
- Battery empty

Congratulations you completed all the Infusomat scenarios.

Please complete the survey by scanning the QR code on your smart device so that we can continue to improve our training.