

Setting up and commencing a CADD™-SOLIS or CADD™-SOLIS VIP infusion pump: A step-by-step guide

- This guide assumes that a subcutaneous cannula has already been inserted into the person.
- All volumes and rates shown in this step-by-step guide are examples only.
- This guide is relevant for use with a CADD™-SOLIS or CADD™-SOLIS VIP infusion pump.

Equipment

- CADD™-SOLIS VIP pump
- CADD™ medication cassette 50 mL (single use item – replace every reload)
- CADD™ extension set (replace when medicines order changes)
- 4 x AA batteries or a CADD™ rechargeable battery pack
- 30 mL Luer Lock syringe
- A 'Medicines added' label
- The medicines order from the prescriber
- Medicine ampoules
- Alcohol wipe
- Diluent (30 mL)
- Blunt drawing up needle
- Sharps container
- Gloves and personal protective equipment (PPE) according to local policy and procedures
- A carry pouch or holster for the CADD™-SOLIS VIP infusion pump



Procedure

1. Install the batteries or rechargeable battery pack

- Ensure the pump is either stopped or turned off.
- Turn the dial on the battery door anticlockwise to open the battery door.
- Insert 4x AA batteries OR rechargeable battery pack
- Close battery compartment door and lock by turning dial clockwise

NOTE: The pump will retain all programmed information while batteries are removed. Pump will not operate without correct batteries installed. Pump will not deliver with AC power supply only; it requires batteries installed to operate, even in presence of an AC power supply.

2. Complete a 'Medicines added' label



3. Prepare the medicine

- Attach the blunt drawing up needle to the Luer Lock syringe and draw up medicine, as per the medicines order
- Fill the syringe to 24 mL total volume of medicine and diluent
- Replace the needle cap



CAUTION: DO NOT attach extension set to the subcutaneous cannula yet.

4. Fill the CADD™ medication cassette

NOTE: This should be a clean/aseptic technique.

- Open the cassette packet
- Leave the blue clip on the cassette until ready to latch it to the pump
- Remove the white protective cap from end of tubing
- Connect the Luer Lock syringe containing the medicine to the end of the tubing
- Tilt the cassette and fill slowly with the medicine diluent mix. When all the fluid is inserted, clamp the line. Gently tap the cassette to collect air at the outlet point (circled)
- Open the clamp and suck out any air bubble with the syringe
- Re-clamp the line



5. Attach the extension set

- Disconnect the Luer Lock syringe and attach CADD™ extension set using the end with the blue cap
- Label the medication cassette clearly with the completed 'Medicines added' label
- Dispose of all rubbish

NOTE: Pump will not prime the line if tubing is incorrectly attached, as it contains an anti-syphon valve. Correct configuration is blue end to the medication cassette and purple end to the patient.



6. Turn on the infusion pump

Press and hold the power switch to turn the pump on.

- The pump starts the power sequence during which it performs various self-tests and tests for alarm conditions
- After the power up is completed, listen for the Morse Code "OK" sound (a series of six audible beeps). If you do not hear this sound, there may be a problem with the audible alarms. Contact the manufacturer
- If any issues are found while the pump is starting, alarms will sound. Read the *Practical Handbook for Health Professionals* for more information about alerts and alarms



7. Attach the CADD™ medication cassette to the infusion pump

- Remove the blue clip from the top of the cassette
- Check that the tubing is clamped
- Ensure the pump is unlocked (using the pump key) and open the cassette latch
- Insert the cassette hooks into the hinge pins on the underside of the pump
- Place the pump upright on a firm, flat surface, and then press down on the latch side of the pump until the cassette firmly clicks into place
- Lift the cassette latch into the closed position. You should be able to move the latch into the closed position with minimal to no resistance
- Verify the cassette is attached correctly. The top of the cassette should line up evenly with the bottom of the pump and be securely attached. A message will appear in the status bar to confirm proper attachment
- To lock the cassette, insert the pump key into the cassette/keypad lock and turn it clockwise into the locked position. 'Cassette Locked' appears briefly in the status bar



NOTE: The cassette must be locked to prime the extension tubing and to start the pump

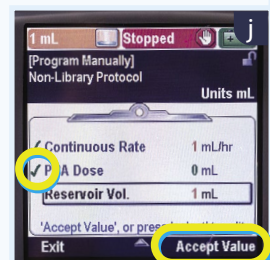
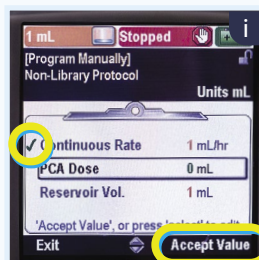
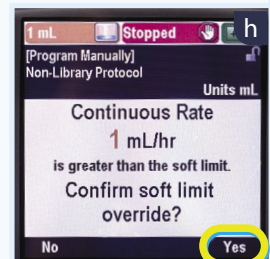
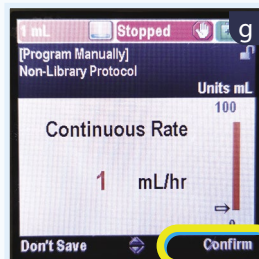
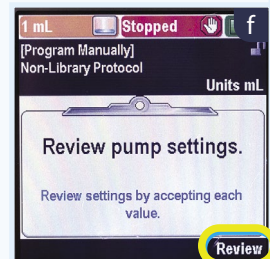
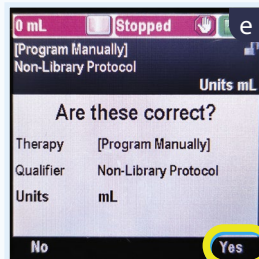
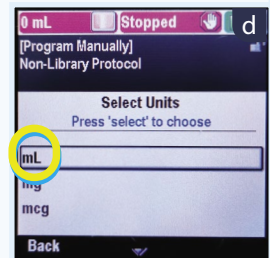
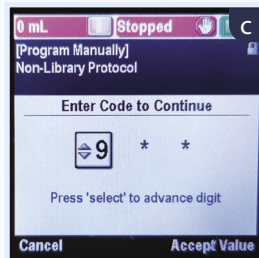
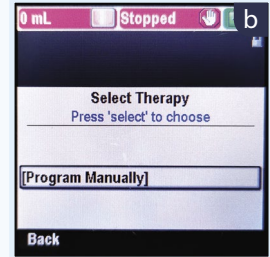
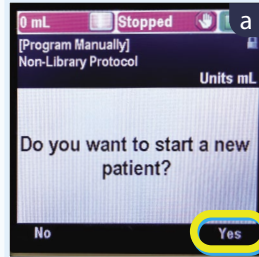
TROUBLESHOOTING

- If you experience resistance when lifting the cassette latch, DO NOT FORCE the latch as this can damage the pump.
- If the cassette is attached incorrectly, there will be an uneven gap between the cassette and the pump, with the gap appearing on the latch side of the pump. If an uneven gap exists, unlatch the cassette, and repeat the process.
- If you are unable to attach the cassette to the pump with minimal to no resistance, the cassette is not in the proper latching position; unlatch the cassette and repeat the process. If you are unsuccessful, do not use the pump and contact the manufacturer for further assistance.

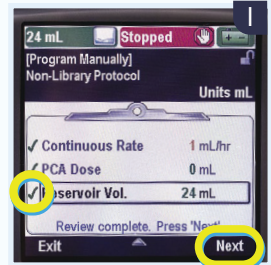
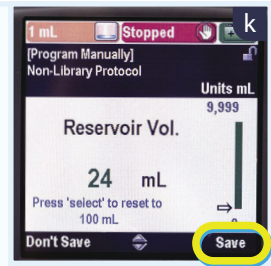
8. Program the infusion pump and review the infusion settings

WARNING: This step-by-step guide refers to the **MANUAL OPERATION MODE ONLY** of the CADD™-SOLIS VIP infusion pump. The manual operation mode does not contain programming limits. Carefully review each parameter to ensure it accurately matches the medicines order.

- a. Once powered-up the pump displays **Do you want to start a new patient?**
 - Confirm by pressing the soft key under **YES**
- b. From the Select Therapy menu select **[Program Manually]** and press **select**
- c. Enter the manual code 921 by pressing **▲** or **▼**
 - Press **select** to advance to 2nd and 3rd digits
 - Once the 3rd digit is entered, press **select**
- d. From the **Select Units** menu select **mL** and press **select**
- e. The pump screen will display **Are these correct?**
 - Therapy **[Program Manually]**
 - Qualifier **Non-Library Protocol**
 - Units **mL**
 - Verify the chosen protocol by pressing **YES**
- f. Once the pump has programmed this information, the pump will then prompt you to review the settings. Select **REVIEW**
- g. The screen displays **Continuous Rate**
 - Press **select** to change the rate
 - Press **▲** until the rate shows 1 mL/hr –
 - Press **Confirm**
- h. The Screen will display **Confirm soft limit override?** Press **YES**
 - The pump will save this information
- i. Press **ACCEPT VALUE** to confirm the rate. A green tick will appear
- j. The pump automatically moves to **PCA Dose 0 ml**. This function is not used in this guide
 - Press **ACCEPT VALUE** to confirm. A green tick will appear



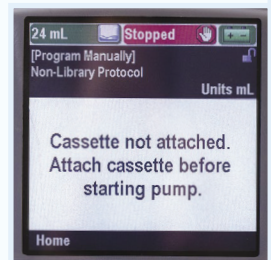
- k. The pump automatically moves to **Reservoir Vol.** Press **select** to edit the volume
 - Change the volume to 24 mL by pressing **▲**, then press **SAVE**
The pump will save this information
 - Press **ACCEPT VALUE** to confirm. A green tick will appear
- l. The pump screen will display:
 - Continuous Rate 1 mL/hr**
 - PCA Dose 0 mL**
 - Reservoir Vol. 24 mL**
 - The review is complete; select **Next** to continue



NOTE: Once the pump is programmed, if the cassette is not attached a prompt on the screen will display:

'Cassette not attached. Attach the cassette before starting pump.'

Attach a filled medication cassette and lock the pump using the key.



9. Prime the extension set tubing

Priming fills the tubing downstream of the pump with fluid, removing any air bubbles.

- Prime the tubing before connecting it to the patient's subcutaneous cannula
- The pump must be stopped and the clamp open

To prime the extension set tubing:

The pump displays the screen: **Prime tubing?**

a. Select **YES**

b. Pump screen prompts:-

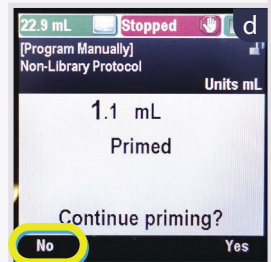
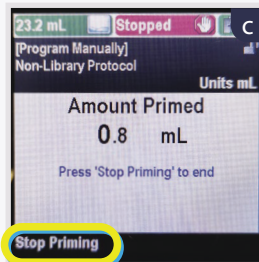
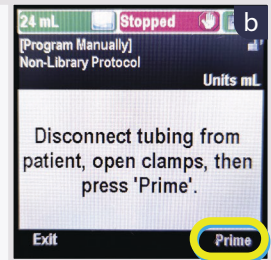
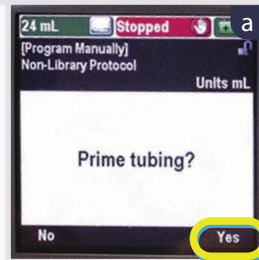
Disconnect tubing from patient, open clamps, then press 'Prime'

– Select **PRIME**

c. The pump will start priming the extension set tube. Prime the tube with approx. 1 mL of medicine or until some drops of fluid come out of the extension tube.

Once this occurs, select **STOP PRIMING**

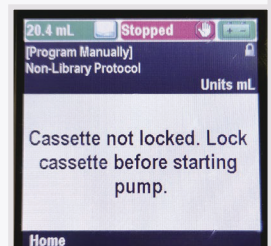
d. When pump prompts **Continue Priming?** select **NO** if the priming is complete and re-clamp the line.



NOTE: If the cassette is not locked the screen will display:

Cassette not locked. Lock cassette before starting pump

Lock the cassette using the pump key

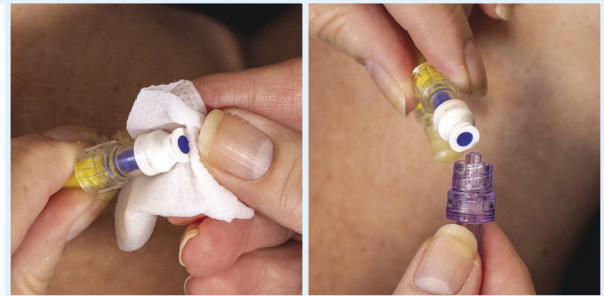


NOTE: Because you have primed the extension set with approximately 1 mL of volume, the pump will not run for a full 24 hours. It will finish approximately one hour early. This will only occur on day 1 of the infusion. On subsequent days, the pump will run for the full 24 hours.

NOTE: On subsequent days, the extension set will not need to be primed

10. Take the pump to the person's bedside

- Wash hands and don PPE as required
- Use an alcohol wipe to swab the end of the subcutaneous cannula
- Remove the cap from the purple end of the extension set and connect it to the person via the subcutaneous cannula



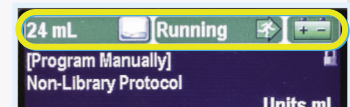
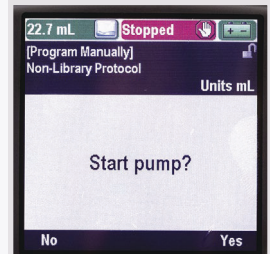
NOTE: Use a separate subcutaneous cannula for breakthrough doses



11. Start the pump

NOTE: Before starting the pump:

- Ensure correct protocol and patient specific parameters are displayed.
- Check that the clamp is open, the extension tubing is primed, and the pump is connected to the patient according to your facility's policy and procedures.

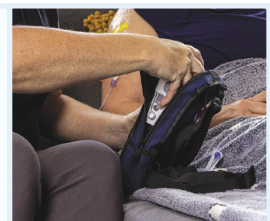
- Pump will prompt **Start pump?** If ready to start the pump, select **YES**
- The pump will start delivering medicine to the person
 - When the pump is running, **Running** appears with green highlighting on the centre of the status bar and the green indicator light flashes
 - Left-hand side of screen will display **[Volume to be Infused]** in mLs
 - Right-hand side of screen will display **[Battery Remaining]**



- If you are not ready to start the infusion, press stop/start  and the pump will remain on standby until you are ready to start
- Press  to start the infusion
- If the pump does not start, a message appears on the display. Refer to the *Practical Handbook for Health Professionals* for more information

12. Place the infusion pump in a holster (or lockbox) if needed

The pump can be stored beside the person or carried in the holster if the person is ambulatory.



13. Complete documentation according to local policy and procedures



14. Monitor the infusion pump

Monitor the infusion over time as per your facility's policy and procedures.

- Check the status bar to confirm correct volume is in the cassette reservoir, the pump is running and sufficient battery life remaining
- Check the screen to confirm the pump is still running at the same infusion rate as originally set
- Check for signs of physical damage to the infusion pump and accessories

a. When a medication cassette is nearly empty:

The pump will sound an alarm


b. When a medication cassette is empty:

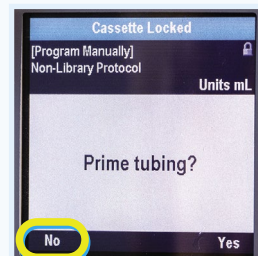
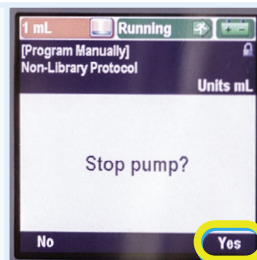
The pump will stop automatically and an alarm will sound



Subsequent infusions

Follow this procedure to remove the empty medication cassette, attach a new medication cassette and start a subsequent infusion.



- Press  Pump displays **Stop pump?**
- Press **YES**. Pump displays **Pump is stopping**
- Clamp the medication cassette tubing
- Unlock the pump with the pump key, pull down the cassette latch and remove the empty cassette from the pump. **Cassette Unlocked** briefly appears in the status bar
- Disconnect the empty medication cassette from the person's subcutaneous cannula extension set. Attach a new, filled medication cassette to the extension set and un-clamp the tubing
- Attach the new medication cassette to the pump. Lock with the pump key
- Once the new cassette is attached and locked, the pump displays **Prime tubing**

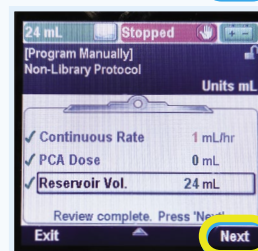
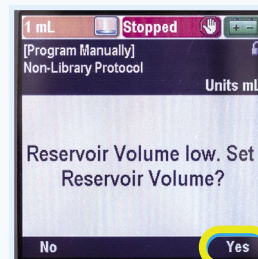


NOTE: If the extension set is already primed, select **NO**. The infusion will now run for 24 hours because the extension set is already primed.

NOTE: If the extension set is not primed, follow the procedure to prime the tubing.

CAUTION: If the medicines order has changed, connect a new extension set and prime it before connecting to the person's subcutaneous cannula.

- The pump will display **Reservoir volume low. Set Reservoir Volume?** Press **YES**
- The screen displays a reservoir volume. Use  or  to adjust the volume to 24 mL
- When the reservoir volume is correct, press **SAVE**. The Pump displays **Reservoir volume.....saving**, then **Review pump settings**
- Press **REVIEW**, then check the patient specific parameters and **Accept Value** on each parameter
- When you have finished the review, press **NEXT** to continue
- The pump displays **Start pump?** Press **YES**. The pump will start delivering medicine to the person
- Monitor the infusion and pump as per your local policy and procedures



For more information and educational resources about the CADD™-SOLIS and CADD™-SOLIS VIP infusion pumps, visit: PallConsult.com.au