

CV-3+ Proposed Competency Evaluation

1. Have user install circuit, pneumotach, and test lung.
2. Set up vent for the following settings:
 - a. Assist Control Mode: Assist Control
 - b. Tidal Volume = 500 ml
 - c. PEEP = 5 cm
 - d. RATE = 12
 - e. Adjust Insp. Time so it is 1.00 seconds
 - f. FiO₂ = 30%
3. Set all appropriate alarm parameters.
4. User should set Sensitivity appropriately.
 - a. Explain what occurs when a leak around the ET tube is present, and how the sensitivity can be adjusted appropriately in situations where a leak cannot be addressed.
5. Since the vent delivers a square wave pattern to deliver the breath, what is probably the best way to make a patient more comfortable (so they feel like they are getting the proper breath) without increasing the volume?
6. When increasing the PEEP setting, what should you be aware of when adding PEEP to the system?
7. In order to provide pressure regulated ventilation instead of volume limited, what might you do to assure the patient is comfortable with the settings?
8. When the vent is turned off, how do you silence the Beep?
9. How long will the battery last with a full charge with, with the back light on all the time?
 - a. How can the back light be turned off, in order to greatly extend the battery life?
 - b. How can it be turned back on?
10. What does the Screen Lock key do, and how can it be turned OFF?

CV-2i+ Competency Evaluation Answers

1. Ensure appropriate infant circuit is used, and exhalation valve and pressure lines are connected to the appropriate fittings.
 - a. It is possible to set up the vent without the pneumotach being in line. In this case the exhaled tidal volume measurement feature must be turned OFF (by selecting the Low Limit selection and using the arrow keys to scroll down past 50 ml to OFF)
2. Note: Typically, for volume ventilation, users will normally ensure that the volume setting is in the area just below the Rate setting and is controlled by the arrow keys. In this case, the Inspiratory Time varies with the setting of the Flow Knob.
 - a. If the vent is NOT setup this way, simply turn power ON then select the SETUP key in the lower right section of the screen, Then select the TV/INSP key. Make sure that Tidal Volume is highlighted. Then return to the MAIN Screen.
3. Once settings are dialed in and vent placed on patient, user should demonstrate how parameters can be set (Selecting and changing with ARROW keys).
 - a. Users should understand and be able to explain that the High Peak Pressure Alarm will act as a safety Pop-Off and should be set appropriately so as to limit the allowable peak pressure.
 - b. Users should understand that the Low Peak Pressure alarm will act as a disconnect alarm, and thus should be set lower than the resulting peak inspiratory pressure.
 - c.
4. With a test lung and no leak, a setting of around 1 is probably appropriate. It can be set to as low as 0.2 cm and as high as 10 cm.
 - a. In the event of a patient that may not have a cuffed ET tube, the resulting leak may cause the vent to autocycle. The sensitivity may need to be dialed up in this case to offset the leak. Since leaks around ET tubes can be positional in nature, this setting should be reevaluated when the patient's position is changed.
5. Often times patient's may feel as if they are not getting an adequate breath even though they are receiving the full volume. Increasing the flow (which will shorten the Insp. Time) will often alleviate this discomfort
6. Since the change in the PEEP dial setting can only be reflected AFTER the subsequent breath, it should only be increased in small increments (you can lower the PEEP easily because pressure can be released from the circuit easily...but in order for pressure to be added, the next breath must occur so the status can be evaluated.
7. Switch the vent so that the Insp. Time is controlled and set by the arrow keys and the Volume varies with flow...This will allow the Appropriate Insp. Time to be set...and since the pressure will be limited by using the Max Press knob to limit the breath at a desired pressure level...this way the flow can be turned up to meet the patient's demand (remember, in THIS case, the tidal volume shown on the MAIN screen is really irrelevant (the pneumotach will still report an accurate exhaled tidal volume on the Alarm 1 screen)
8. The black button silences the Beep.
9. The battery will last 6-7 hours on a full charge with the back light on. It takes approximately 4 ½ hours to charge a fully depleted battery.
 - a. To turn back light OFF, touch and hold along the bar graph until the second BEEP.
 - b. Any touch on the screen will turn back light (as well as any alarm condition)
10. The screen lock will allow navigation to the other screens, allow the Alarm Silence button to be used, and will allow the back light to be disabled. It will NOT allow the modes or settings to be changed until it is unlocked. To unlock, simply touch the key twice within 5 seconds.