Trilogy Non-Invasive
Ventilation Therapy

Servicing Location: ______________________________________

Location Phone Number: _________________________________
Table of Contents Here
INTRODUCTION

This therapy has been ordered by your physician.

The therapy is designed to reduce your work of breathing by resting your breathing muscles and expanding your lungs while you sleep. When you wear the device for a minimum of 6-8 hours per night, the prescribed settings are designed to keep your airways open, help you remove waste gas (CO$_2$) and increase your oxygenation. Over a period, you should notice a gradual increase in energy, an increase in your activity level, fewer and less severe morning headaches and feeling more alert.

This therapy is designed to reduce the carbon dioxide (CO$_2$) levels in your blood. An increase in carbon dioxide makes you sluggish or lethargic. Sometimes in severe cases it reduces or blocks your stimulus to breathe leading to hospitalization.

The settings ordered for you are specific to your height and weight and always requires a Doctor’s order to change the settings.

In the AVAPS-ae mode, the therapy is designed to be comfortable for your breathing. The ventilator has minimum and maximum settings and the ventilator will continuously monitor your breathing pattern and only give you what pressures you need. This set range also protects your lungs from receiving too much pressure.

We at Barnes Healthcare Services are dedicated to helping you reap the benefits of Non-Invasive Ventilation therapy through successful, consistent use of the Trilogy. You will have a Respiratory Therapist come to your home initially and then for 2 more consecutive months and then every four months thereafter. If you need additional help, we will adjust the visit schedule to help you be successful with your Therapy.

Thank you for choosing Barnes Healthcare Services.

Please note: The information included in this document is for informational purposes only, and is not intended to substitute in any way for medical education, training, treatment, advice, or diagnosis by a healthcare professional. Barnes Healthcare Services makes no warranties related to the information in this document. A qualified healthcare professional should always be consulted before making any healthcare related decisions.
TRILOGY 100 VIDEO LINKS:

Introduction to Trilogy100:
https://www.youtube.com/watch?v=u3veUjaR5Bo

Using Trilogy100 - Overview, Setup, and Screen Display
https://www.youtube.com/watch?v=QRfWNpTMpNk

Using Trilogy100 - Menus, Alarms and Cleaning
https://www.youtube.com/watch?v=xF-vxwrsWKo&t=23s
Typical set up of Trilogy Non-Invasive Ventilation without a humidifier.
Typical setup of Trilogy Non invasive ventilation with heated humidifier.
Front Panel Features:
The Front panel contains the control buttons, visual indicators, and display screen.

Buttons
The following buttons are included on the front panel of the device.

1. **Start/Stop Button**
   - This button turns the airflow on or off, starting or stopping therapy.

2. **Alarm Indicator and Audio Pause Button**
   - This button serves two purposes: it temporarily silences the audible portion of an alarm, and it also acts as an alarm indicator. When silencing an alarm, if the cause of the alarm is not corrected, the alarm sounds again after one minute. Each time the button is pressed, the alarm silence period resets to one minute. See Chapter 6 for more information.

3. **Up/Down Button**
   - This button allows you to navigate the display menu and edit device settings.

4. **Left and Right Buttons**
   - These buttons allow you to select display options or perform certain actions specified on-screen.

Visual Indicators
Several power and alarm indicators appear on the front panel.

5. **AC Power LED**
   - In the lower right corner of the front panel, a green LED (\(\sim\)) indicates that AC power is applied to the device. This light remains on as long as adequate AC power is available.

6. **Keypad Backlight LEDs**
   - The Start/Stop, Up/Down, and Left/Right buttons all have a white LED that lights up if the keypad backlight is turned on in the device Options menu. See Chapter 5 for more information.

7. **Red Alarm LED**
   - On the Alarm Indicator/Audio Pause button, a red light flashes to indicate a high priority alarm.

8. **Yellow Alarm LED**
   - On the Alarm Indicator/Audio Pause button, a yellow light flashes to indicate a medium priority alarm. A solid yellow light indicates a low priority alarm.
Monitor Panel:
This panel lets you know which therapy mode is being used.

**Pressure:** amount of force it takes to deliver a breathe to the lungs.

**RR:** Number of breaths the patient is taking per minute

**Vte:** Tidal Volume is given in ml., volume or air exhaled with each breath

**Leak:** measured in liters / min from the exhaled title volume.

Measured Settings Panel:

**PIP:** Peak Inspiratory Pressure - highest pressure delivered on patients last breath

**MAP:** Mean airway pressure - average pressure in patient airway

**I:E Ratio:** amount of time inhaling compared to the amount of time exhaling

**Peak Flow:** highest inspiratory flow delivered on patients last breath

**MinVent:** amount of air delivered to patient over last minute.

Status Panel:
Shows what features are activated. Typically you will see icons that relate to the SD Card / Detachable and Internal Battery and Access to the ventilator.
SIDE OF TRILOGY

1. Power cord to AC power, when plugged in the vent is charging the internal and detachable batteries. (keep plugged in when possible)
2. Air Outlet Port
3. Oxygen Adapter(not pictured): If you are ordered Oxygen (O₂) to use with your ventilator therapy this is where you would attach the O₂ tubing. *(Cleaning: wipe off the adapter once per week with a damp cloth).*
4. Bacteria Filter: *Replace with new one once per month.*
5. Tubing: Clean once per week by soaking for 15-20 minutes in dishwashing liquid, rinse, and then hang to dry.
1. **Pollen (foam) Filter**: This needs to be rinsed at a minimum once per week, by running under water to eliminate dust. Be sure that it is dry before putting back in the ventilator. This can be replaced once every 6 months.

2. **Detachable Battery**: This battery will last approximately 3 hours when fully charged. To make sure your battery stays charged and ready for power outages, keep your ventilator plugged in at all times. There is also an internal battery that will last approximately 3 hours also.
A humidifier is sometimes added to your therapy to help with dryness from the airflow of the ventilator. If you opt to use a heated humidifier you will need to make sure you are cleaning the chamber and tubing at a minimum of weekly.

1. **Heater unit:** the green light indicates the unit is on
2. **The dial** is used to provide more heat to the water producing more humidity in air being delivered to you. If you are experiencing dryness in your mouth or nose, then you should gradually increase the heat over several nights. Should you start having water in the tubing or splashing up into the mask, turn the dial down to reduce the amount of humidity. You can also use the humidifier without heat, this will provide a small amount of humidification to your Airways.
3. **Cleaning:** *Soak the chamber in warm water with dishwashing liquid for 15-20 minutes, rinse well and let dry the chamber itself can be replaced every six months.*
1. Headgear: **This should last 6 months or more.** This can be hand washed in warm soapy water and rinsed off if needed.
2. Cushion: This needs to be wiped off with a damp cloth daily. **This can be replaced up to once a month, typically when it doesn’t hold a seal any longer.**
3. Frame: This holds the cushion and headgear in place. **It can be replaced with the whole kit (headgear / cushion) once every six months.**
If you have alarms on the Trilogy unit, the alarm situation will be displayed on the bottom half of the screen. This lets you know what the variations in normal functions the ventilator detects happening.

Typically if you see Low Pressure or Disconnect you have a leak in the tubing, mask, or O₂ adapter, or maybe something has come disconnected from the circuit.

The easy fix is to find the leak and fix it. Often it is as simple as unhooking the mask kit and fitting it on again.

The tubing or bacteria filter may have a hole, crack, or tear that is causing a leak. If so this should be replaced.

The O₂ tubing is not connected to the O₂ adapter.

Alarm Silence Button: This will silence the alarm for a minute until you find the problem. The red light will remain blinking until the alarm is corrected.

Reset Button: The alarm notification will remain on the screen after the problem has been corrected. Once the alarm has been corrected, press the reset button to clear the alarm messages.
Other alarms you may experience:

Low Battery / Battery Depleted: Check to make sure the green light on the front is on. If it is not check the power cable’s connection to the machine and ensure that it is plugged into a working (unswitched) outlet. This will start charging the internal and external batteries as indicated by the yellow lighting bolts over the icons.

Vent Inoperable: If you see this alarm, you will need to call Barnes Healthcare Services to have your vent exchanged. Types of Ventilator Alarms

**High priority Alarms:** 3 beeps followed by 2 beeps -- **the audio pause button will be flashing red**. This alarm indicates a critical issue with breathing or operation of the ventilator.

*ALWAYS LOOK AT THE PATIENT FIRST*, before attending to the equipment to ensure he / she are being properly ventilated.

The display portion of the screen will show you the alarm situation.

When the alarm situation has been taken care of press the reset button under the display.
**Medium Priority Alarms:** 3 beeps -- the audio pause button will be flashing yellow. *These types of alarms require prompt attention.*

The alarm situation will be on the display screen and when the situation has been taken care of you press the reset button to clear the alarm.

**Low Priority Alarms:** 2 beeps and the audio pause is a solid yellow light. These types of alarms convey information you should be aware of.

**Informational Messages and confirmation alerts:** 1 single beep. The message will be on the display screen that a condition has occurred that requires attention such as:

AC Power is disconnected or detachable battery is not charging.
Alarm Summary:

**Loss of Power**  High Priority
Press Start / Stop button and then press Right button to silence the alarm. If using AC power, try plugging the device into an alternate AC power source. If loss of power continues and detachable battery is depleted connect pt to back up vent.

**Ventilator Inoperative**  High Priority
Press Start / Stop button. If display is operational, Power Off confirmation screen appears. Select Right button to shut off device and silence alarm. Remove patient from vent and connect to back up vent. contact Barnes Healthcare Services for service.

**Check Circuit**  High Priority
Make sure there is no kinked or pinched tubing. Make sure tubing is properly attached. Make sure all tubing and exhalation devices are clean and free of condensation.

**High Expiratory Pressure**  High Priority
Make sure tubing is not kinked or pinched. Check patient’s breath rate.

**Low Expiratory Pressure**  High Priority
Make sure the tubing is not kinked or pinched.

**Circuit Disconnect**  High Priority
Check breathing circuit and reconnect it if it has become disconnected, or fix the leak.

**High Inspiratory Pressure**  High / Medium Priority
Make sure tubing is not kinked or pinched. Check patient to see if patient needs suctioning.

**Low Inspiratory Pressure**  High Priority
Check patient circuit for leaks or disconnects. Check the trach. Is the leak occurring from the trach site, is the pilot balloon properly inflated?