HELP THEM BREATHE MORE NATURALLY†

Puritan Bennett™ 980 ventilator system product training touch-screen guide

† Compared to conventional mechanical ventilation (VC, VC+, PC, PS)
Welcome to the Puritan Bennett™ 980 ventilator product training.

During your training session, your trainer will review certain features and operations of the Puritan Bennett™ 980 ventilator. This handout provides a copy of certain images of the touchscreen and explanations of some functions, and space for you to take notes. This guide is also intended to be used as a reference once training is complete.

Thank you. We look forward to working with you.
Vent startup

Just after Power-On Self-Test (POST), you have the option to select from New Patient, Same Patient, or SST.

Select SST to perform the Short Self-Test or if already passed, skip the SST and select New Patient or Same Patient.

New Patient setup

After you select New Patient or Same Patient, the Setup screen appears, offering:

New Patient — quick start
1. Touch New Patient.
2. Enter PBW or Gender and Height.
3. Touch Quick Start.
4. Connect the circuit wye adapter to the patient’s airway or interface connection to initiate ventilation at the institutionally configured or factory configured default settings that are based on PBW/Gender, Height, and circuit type used during SST.

New Patient
1. Touch New Patient.
2. Enter PBW or Gender and Height.
3. Adjust ventilation/alarm settings and then touch Start.
4. Connect the circuit wye adapter to the patient’s airway or interface connection to initiate ventilation at your specified settings.
Same Patient setup

1. The previous ventilator settings are displayed.
2. Touch start and connect the circuit wye adapter to the patient’s airway or interface connection to initiate ventilation at the same settings in use prior to powering the ventilator off.

Apnea

Within the Setup screen, you can touch the Apnea tab and program:
- Ventilation Type
- Mode
- Mandatory Type
- Trigger Type
- All settings pertinent to the Ventilation Type, Mode, Breath Type, and Trigger Type that have been selected for Apnea ventilation.

Apnea settings are also used for manual inspiration.
Alarms

- The Alarm tab displays six columns of alarm settings and current patient values.
- The white shading area within the alarm column refers to the recent range of patient data values for the last 200 breaths.
- The Puritan Bennett™ 980 ventilator uses yellow and red on the 360 degree dome, banner, and alarm columns to visually differentiate urgency.
- The Puritan Bennett™ 980 ventilator uses three different audible tones to differentiate urgency.
- Alarm decibel level increases in the event of an unattended alarm after 30 seconds and then again at 60 seconds.
- The alarm banner (not shown in the picture) provides information and recommendations.

Ventilator data is stored in various logs
Configurable patient data

There are eight patient data cells displayed across the top of the touch screen. The four on the right can be swiped to the left or right to display additional cells. You can configure each individual cell to display the most appropriate data for your patient situation. Double tap a cell to show the data available for viewing, and select the patient data parameter to be displayed.

Large font patient data

Swipe down on the tab from the vital patient data banner to open the additional patient data screen. Then swipe the tab down again to open the large font data display. This view shows 14 data/waveforms/loops measurements. Data is displayed in a larger font for easy viewing. You can also configure the data that appears in these cells by double tapping a cell.
Waveform Layout

Touching the Waveform Layout Icon opens the Graphs tab, Large Font tab, and Patient Data tab.

- The Graphs tab allows for five configurations of waveforms.
- The Large Font tab allows for five configurations of numerical patient data.
- The Patient Data tab allows for five configurations of numerical patient data.

Pause, cursor, and scales

To pause the graphics, touch the pause icon, which automatically generates a cursor for numerical interpretation of graphical data.

You can move the cursor left or right by touching the screen and dragging the cursor left or right or turning the knob on the bezel.
Prox Flow

Touching the wrench icon and then Options tab will reveal the Prox Flow tab, where the Prox Flow sensor can be enabled or disabled. The Proximal Flow Option is only functional when the NeoMode software feature is installed and when a neonatal patient type is selected.

The Proximal Flow Option is used for measuring flows, pressures, and tidal volumes of invasively ventilated neonatal patients with predicted body weight (PBW) of 0.3 kg (0.66 lb) to 7.0 kg (15.4 lbs) using ET tube sizes from 2.5 mm to 4.0 mm.

Tool tips

Touch, hold, and drag the question mark icon over an on-screen item and the function’s definition will be displayed.

Another way to access the same information is to touch and hold an item on the graphic user interface (GUI). The item will glow blue if it is enabled to display a definition.
Respiratory mechanics

Five respiratory mechanics maneuvers are available via the left menu tab and by touching the Respiratory Maneuvers button.

Inspiratory Pause and Expiratory Pause functions are also available on the bezel.

Leak Sync Software

Through Vent Setup, you can touch More Settings and enable or disable the Puritan Bennett™ ventilator’s Leak Sync software.

When Leak Sync software is enabled during invasive or noninvasive ventilation of neonatal, pediatric, and adult patient types the Puritan Bennett™ 980 ventilator will automatically detect and compensate for leaks.

Leak Sync software is available in A/C, SIMV, SPONT, and BiLevel modes.

Leak Sync software is available during all breath types except Tube Compensation (TC) and PAV™*+ software modes.
Stand-by

Stand-By State can be accessed through the left menu tab by touching the Stand-By button.

Reinstitution of ventilation will begin when the patient is reconnected or you touch the Exit Stand-By button and reconnect the patient.

Status display

The status display is a separate display located on the breath delivery unit (BDU). The status display provides the following information during normal ventilation:

- Current power source (AC or DC)
- Presence of primary and extended batteries and their charging status
- Relative available battery charge level
- Circuit pressure graph displaying pressure units, $P_{PEAK}$ alarm setting and current $P_{PEAK}$ and PEEP values
- Connection of air and oxygen
- Ventilator operational hours
- Visual indication of current alarm volume setting
VC+ setup

Through vent setup, you can select settings pertinent to VC+:
- Ventilation Type — Invasive
- Mode — A/C or SIMV
- Mandatory Type — VC+
- Trigger Type — Pressure or Flow
- Tidal Volume
- Inspiratory Time
- Respiratory Rate (frequency)
- $O_2$
- $V_T$ alarm
- $P_{PEAK}$ alarm

BiLevel to inverse

Through vent setup, you can select settings pertinent to BiLevel mode:
- Ventilation Type — Invasive
- Mode — BiLevel
- Mandatory Type — PC
- Spontaneous Type — PS or TC
- Trigger Type — Pressure or Flow
- Respiratory Rate (frequency)
- $O_2$
- Pressure high — pressure setting at the Time High
- $P_L$ — pressure setting at the $T_L$
- $T_r$ or $T_i$ or $T_a$ to $T_r$ Ratio ($T_r:T_a$)
PAV™+ software mode setup

Through vent setup, you can select settings pertinent to PAV+ software mode:
- Ventilation Type — Invasive
- Mode — Spont
- Mandatory Type — none
- Spontaneous Type — PAV+ software
- Trigger Type — Pressure or Flow
- PEEP
- $O_2$

PAV+ software settings:
- % SUPP
- $^1VTI$ alarm
- $^1P_{PEAK}$ alarm
- Tube Type and size (inner diameter)

Monitoring PAV™+ software mode

$C_{PAV}$, $R_{PAV}$ and PEEP are updated every 4 to 10 breaths. The work of breathing (WOB) bar shows two tags:
- Estimated work of breathing done by patient ($WOB_{PT}$)
- The estimated effort needed for patient inspiration, including both patient and ventilator ($WOB_{TOT}$)
Setting up neonatal nasal CPAP

CPAP is available when circuit type is Neonatal and Ventilation Type is NIV.

Alarm management in neonate nasal CPAP

The volume alarms and displays of spirometry are removed.