

Viasys -Pulmonetic Systems LTV 1200

Bob Milisch MEd, RRT

Disclaimer

This training program is intended as a "quick reference" for operation of this ventilator in an emergency situation. Users of this device in an emergency situation should do under the supervision of a regular user. Regular users should go through detailed training provided by employers or through Viasys.

Resources

- CD-ROM's
- Emergency setup card
- www.viasyshealthcare.com

Patient Capabilities

- Patients \geq 5 kg – volume modes

Quick set-up – High Pressure O₂

Quick set-up – Low Pressure O₂

Quick set-up – Low Pressure O₂

Quick set-up Power

Adapter can be used 3 ways

Quick set-up Power

A/C Adapter

Quick set-up - External Power

Universal Power Supply

or Lithium Ion battery

Quick set-up – Circuit Connection

Quick set-up – Circuit Connection

Quick set-up – Circuit Connection

Ventilator Checkout

- Disconnect patient
- Turn Ventilator off
- Push SELECT button and press ON/STANDBY
- REMOVE PTNT will be display area and alarm will sound
 - Press SILENCE/RESET
 - Display area will show VENT CHECK
- Press SELECT and ALARM will be shown in the display area
 - Press SELECT and verify audible alarm
- Press SELECT and DISPLAY will be shown in the display area
 - Press SELECT and all LED's will be illuminated
- Ventilator Checkout
- Press SELECT and CONTROL will be shown in the display area
- Press SELECT and SELECT will be shown in the display area
 - Starting with SELECT, press each button one at a time
 - The name of the button will appear in the window
 - When done press SELECT
 - LEAK will be shown in the display area
 - Occlude the patient wye and press SELECT
 - The LTV will perform several functions and display either LEAK PASS or LEAK FAIL
 - Refer to troubleshooting in the leak test fails.
- Press SELECT and EXIT will be shown in the display area
- Press SELECT or Press CONTROL LOCK twice to exit and resume ventilation

Quick start-up

Quick Start-up

Patient Selection

- After the power-up self test, SAME PATIENT will be displayed. Press SELECT to return to the previous settings
 - Rotate the SET VALUE KNOB to select NEW PATIENT and press SELECT
 - Rotate the SET VALUE KNOB to select between INFANT, PEDIATRIC and ADULT and press SELECT

Quick Set-up – Default Parameters

Feature/Function	Infant (>5 kg < 10 kg)	Pediatric (10-40 kg)	Adult (> 40 kg)
Alarm volume	85	85	85
HP delay	NO DELAY	NO DELAY	NO DELAY
LPP alarm	ALL BREATHS	ALL BREATHS	ALL BREATHS
High f alarm	80 bpm, 30 sec	60 bpm, 30 sec	40 bpm, 30 sec
High PEEP alarm	PEEP +5 cmH ₂ O	PEEP +5 cmH ₂ O	PEEP +5 cmH ₂ O
Low PEEP alarm	PEEP -3 cmH ₂ O	PEEP -3 cmH ₂ O	PEEP -3 cmH ₂ O
Rise Time	5	4	4
FLOW TERM	35%	30%	25%
TIME TERM	TERM 0.5 sec	TERM 1.0 sec	TERM 2.0 sec
PC FLOW TERM	Off	Off	Off
Leak Comp	LEAK COMP ON	LEAK COMP ON	LEAK COMP ON
Breath Rate	20 bpm	15 bpm	12 bpm
Breath type	Pressure	Pressure	Volume
Tidal Volume	50 ml	250 ml	500 ml
Insp. Time	0.3 sec	0.7 sec	1.0 sec
Pres. Control	15 cmH ₂ O	15 cmH ₂ O	15 cmH ₂ O
Pres. Support	10 cmH ₂ O	10 cmH ₂ O	10 cmH ₂ O
Sensitivity	2 Lpm	3 Lpm	3 Lpm
High Pres. Limit	30 cmH ₂ O	30 cmH ₂ O	40 cmH ₂ O
Low Pressure	10 cmH ₂ O	10 cmH ₂ O	10 cmH ₂ O
Low Min. Vol.	0.5 ml	1.0 ml	3.0 ml
PEEP	0 cmH ₂ O	0 cmH ₂ O	0 cmH ₂ O
Mode	Assist/Ctrl	Assist/Ctrl	Assist/Ctrl

Front Panel Buttons and LED's
 Front Panel Buttons and LED's
 Front Panel Buttons and LED's
 Front Panel Buttons and LED's – Battery Level
 Mode Control
 Mode Control – Volume vs. Pressure Modes

Inspiratory/Expiratory Hold

- Push once for inspiratory hold
 - P_{-plat} will be displayed
- _ Display will cycle between C_{-stat}, Delta pressure and P_{-plat}
 - Push twice for expiratory hold
 - P_{-exp} will be displayed during hold
 - PEEP_i will be displayed after release

Manual Breath

- Push to deliver 1 machine breath
Low Pressure O₂ Source
- Push and hold to select low pressure (< 10 psig) oxygen source
 - Cylinder, flowmeter, concentrator or liquid system

Control Lock

- Push CONTROL LOCK
 - LED on
 - Push again to unlock
- May have to push and hold for 3 sec. (Hard unlock)
- MANUAL BREATH, SILENCE and SELECT still active

Changing Controls

- Rate Control (1-80)
- Tidal Volume Control (50 - 200 ml)
- Pressure Control (1 - 99 cwp)
- Inspiratory Time (0.3 – 99 sec.)
- Pressure Support (1 – 60 cwp)
- F_IO₂ Control (21 – 100%)
- Sensitivity (1 – 9 l/m and off)
- PEEP Control (0 – 20)
- Message Display Area
- Message Display Area
- Message Display Area
- Message Display Area
- Message Display Area
- High Pressure Alarm (5 – 100 cwp)
- Low Pressure Alarm (1 – 60 cwp and off)
- Low Minute Volume (0.1 – 99 liters and off)
- Managing Alarms (60 sec.)

LTV Graphics Monitor

- LTV Graphics Monitor - Wave Screen
- LTV Graphics Monitor - Loop Screen
- LTV Graphics Monitor - Data Screen
- LTV Graphics Monitor - Summary Screen
- LTV Graphics Monitor - Trend Screen

Menu – Extended Features

Extended Features

Extended Features – Alarm Operations

- Alarm volume
- Apnea interval
- High pressure alarm delay
- LPP (low peak pressure) alarm
 - High f
 - High PEEP
 - Low PEEP
- PNT assist (remote alarms)

Extended Features – Ventilator Operations

- Rise time
- Flow termination
- Time termination
- PC flow termination
- Leak compensation O2 flush
 - Control unlock
 - Language
 - Ver xx.xx
 - Usage xx.xx
 - Com setting
 - Set date
 - Set time
 - Date format
 - PIP LED
 - LTV x.xx
 - VHome xx.xx
 - Set defaults
 - O2 cyl dur

Extended Features - SBT

- SBT start
- Pressure support
 - PEEP
 - SBT FIO2
 - Minutes
 - High f/Vt
 - Low f/Vt
 - SBT high f
- SBT low f Display f/Vt
- Unit Highlights (testable)
 - Patient capabilities
- Battery – internal external
- Gas sources – High pressure, low pressure
- Circuit – flow transducer, one-way valve and connections
 - Start-up and checkout
 - Minimum expiratory and inspiratory time
 - Extended features

Conclusion

Contact milischr@westernnc.edu if there were any problems with the presentation

Please take the quiz for this presentation and move on to the next presentation