

# O-Two Self-Study Guide

**e500 Transport Ventilator  
Ventilation Modes**



# e500 VENTILATION MODES

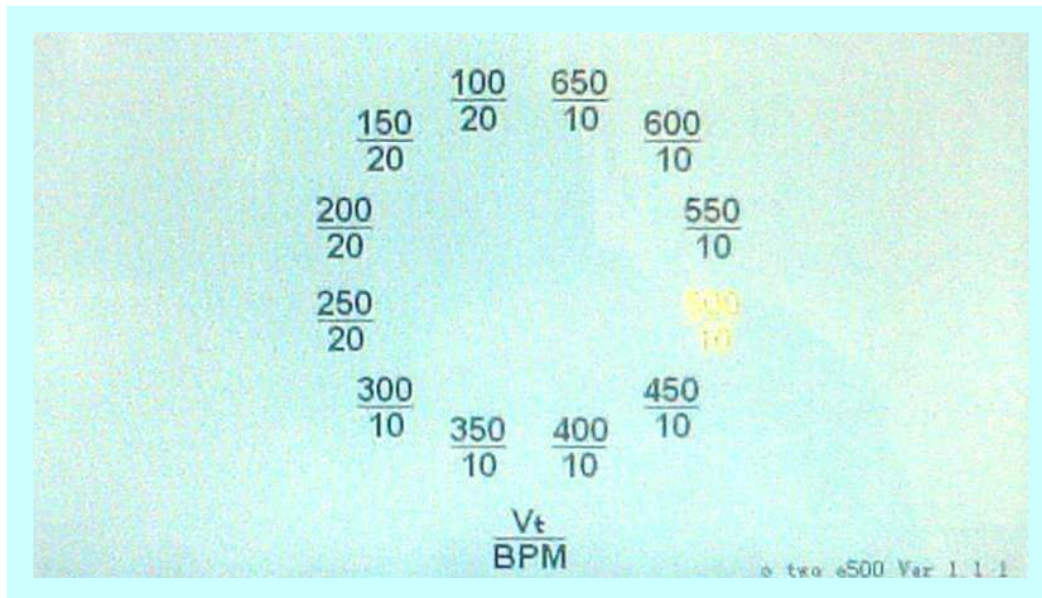
The e500 ventilator has 5 ventilation modes:

Manual Ventilation, Synchronized Intermittent Mandatory Ventilation (SIMV), CPAP, Mask CPR, intubated CPR. In addition the ventilator provides a “Quick Start” mode when the ventilator is turned on.

## 1. Quick Start Mode

The default ventilation mode for “Quick Start” is SIMV.

There are 12 tidal volume/rate options on the startup screen:



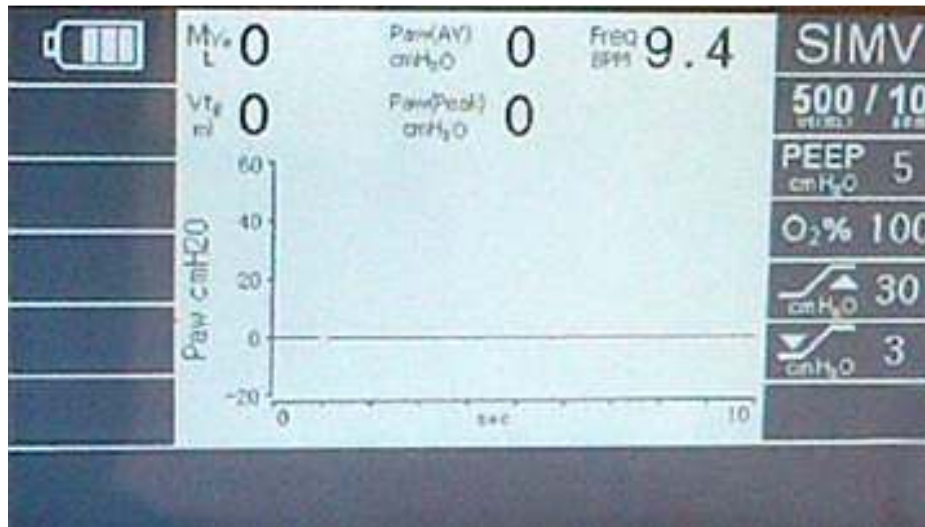
Rotate the control knob to move the cursor over the required patient size select and confirm by pressing the control knob.

**Note:** If a patient size selection is not made and confirmed within 20 Seconds of start up, the e500 Ventilator will automatically commence ventilation in the 500/10 setting. Following startup it is easy to make setting changes to ventilation parameters, alarms or to select other ventilation modes.

The pre-set “Quick Start” defaults are based on the American Heart Association Resuscitation Guidelines recommended Tidal Volume/Ventilation Frequencies for the patient sizes indicated.

## 2. Synchronized Intermittent Mandatory Ventilation - (SIMV)

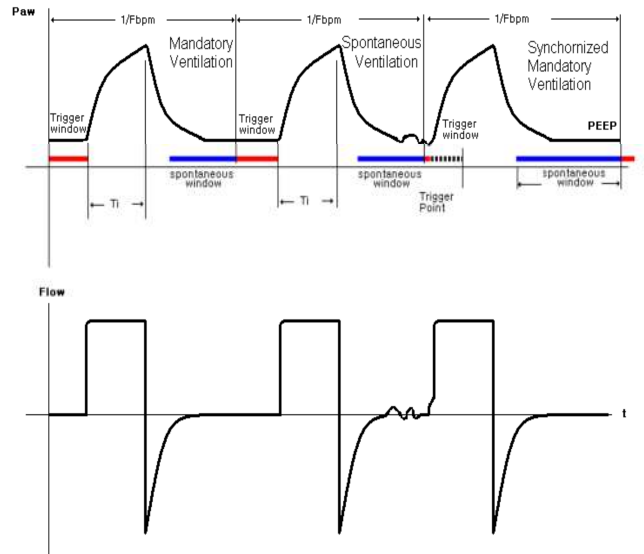
The SIMV mode allows the patient to breath spontaneously. If assistance is needed the vent will assist. If NO patient effort during trigger window - Ventilator will initiate Mandatory Ventilation.



Screen display for SIMV mode

Parameter	Range	Default
Tidal Volume/ Rate	100/20,150/20, 200/20, 250/20, 300/10, 350/10, 400/10, 450/10, 500/10, 550/10, 600/10, 650/10	500/10 or selected by user during start-up
I:E ratio	1:2	1:2
PEEP	0, 4, 5, 6, 7, 8, 9, 10, 12, 15, 18, 20	5
Trig.	3 L/min	3 L/min
O <sub>2</sub> %	(100% or 60%)	100%
P max.	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 80	30
P min.	0, 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20	3
Manual	Refer to Manual and I-Hold section	ready

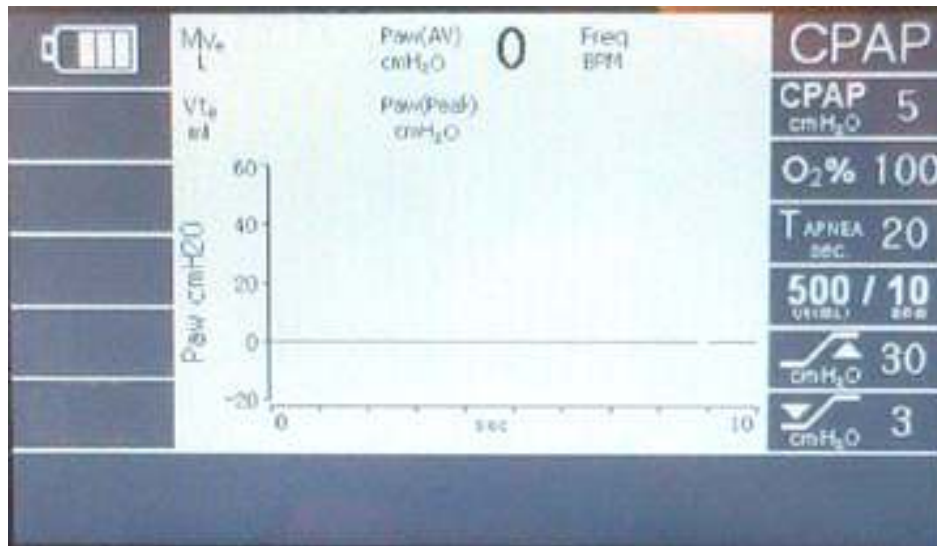
### Range and Ventilation Settings for SIMV.



**SIMV Waveform**

### 3. Constant Positive Airway Pressure (CPAP)

In CPAP mode, the ventilator will deliver a continuous flow rate to generate a continuous positive pressure in the airway. The ventilator uses the control valve to maintain the CPAP level.

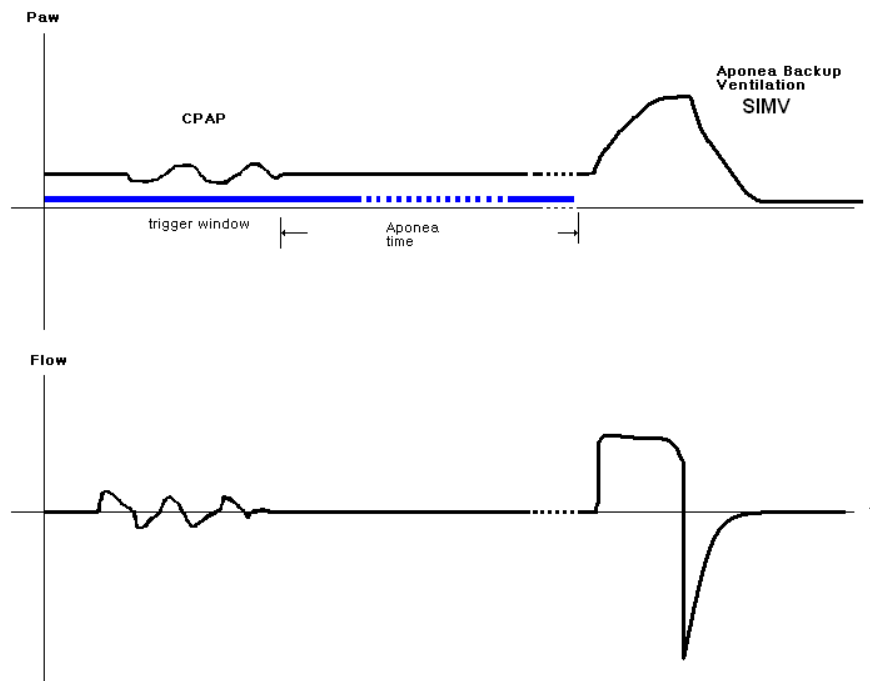


**Screen display for CPAP mode**

### Default Ventilation Setting - CPAP

Parameter	Range	Default
CPAP (cm H <sub>2</sub> O)	4, 5, 6, 7, 8, 9, 10, 12, 15, 18, 20	Carry over from PEEP of previous mode
P max.	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 80	Carry over from previous mode
P min.	0, 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20	Carry over from previous mode
O <sub>2</sub> %	(100% or 60%)	Carry over from previous mode
T APNEA (sec)	10, 15, 20, 25, 30, 40, 45, 50, 55, 60	20
Vt/f (A) (ml/BPM)	100/20, 150/20, 200/20, 250/20, 300/10, 350/10, 400/10, 450/10, 500/10, 600/10, 650/10	Carry over from previous mode

**Note:** CPAP is pre-set with 20 second APNEA backup - settings for Rate BPM, Tidal Volume (Vt), I:E ratio, and Minute Volume (Mv) location is set at the bottom of the screen. The default settings can be adjusted by the operator.



**CPAP waveform**

## 4. CPR Modes

The CPR Mode consists of timed chest compression audible prompts coupled with automatically delivered breaths for both intubated and mask ventilated patients. The screen displays a visual animated display to guide the health care provider while performing CPR. Oxygen is delivered automatically at 100%.

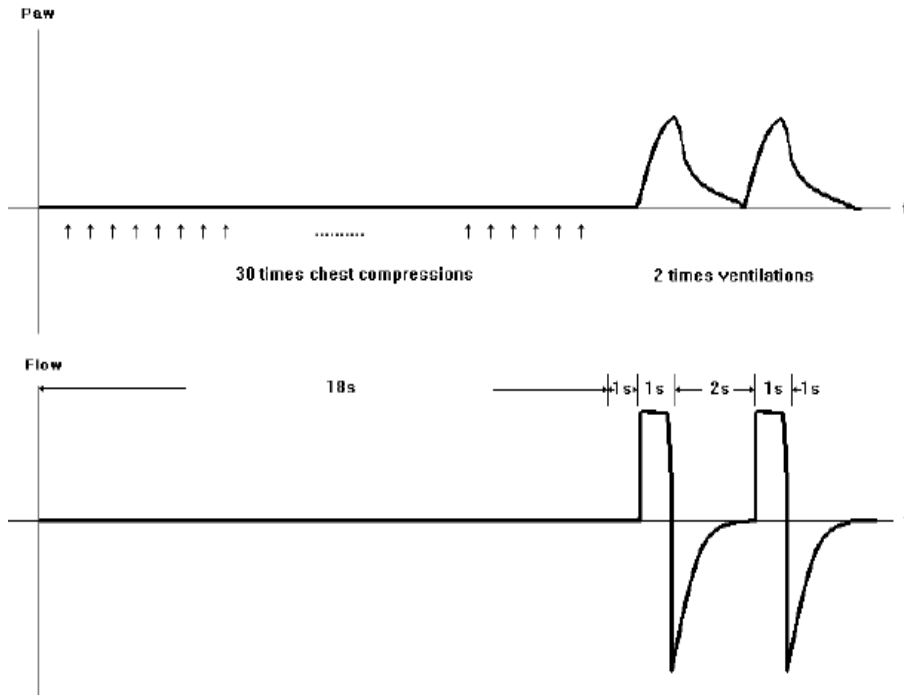
### Default Ventilation Setting- CPR

Parameter	Range	Default
Tidal Volume	100,150, 200, 250, 300, 350,400, 450, 500, 550, 600, 650	Carry over from previous mode
P max.	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 80	Carry over from previous mode
P min.	0, 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20	Carry over from previous mode
O <sub>2</sub> %	100%	100%

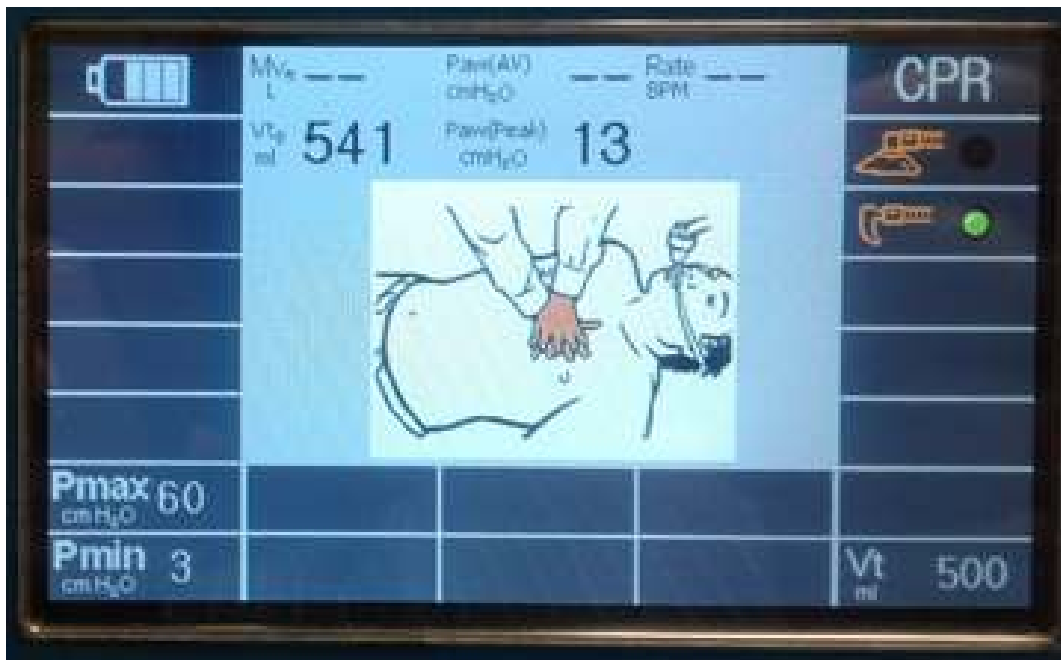


### **Mask Ventilated Patient Basic Airway - 30:2**

**With each chest compression the hands are highlighted;  
the mask highlights in blue when a breath is delivered.**

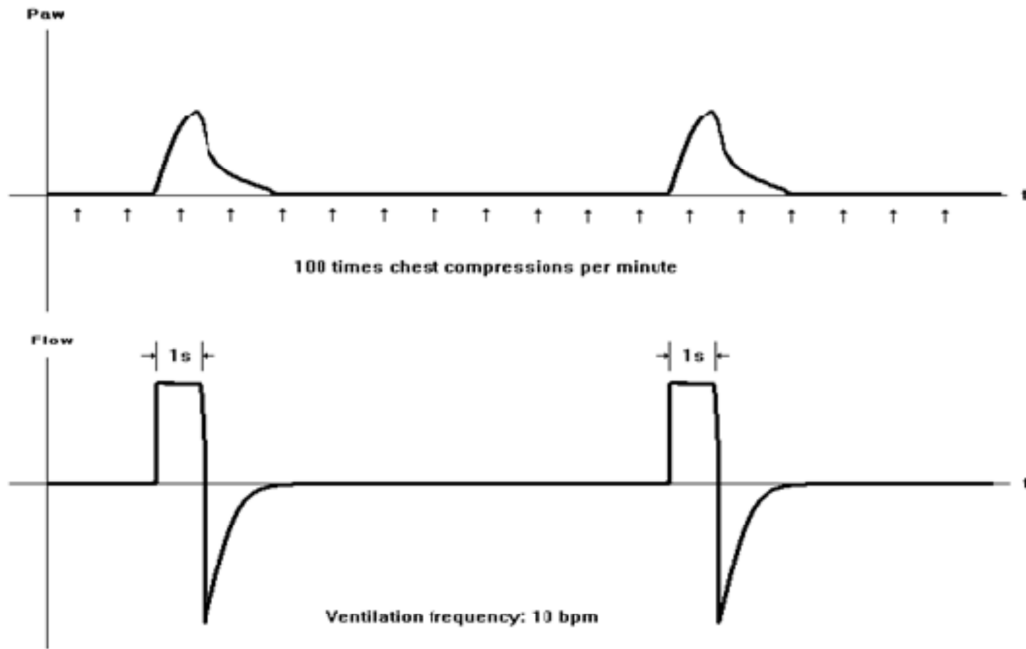


**Mask CPR Ventilation Waveforms**



**Intubated Airway Ventilation  
Advanced Airway - Asynchronous**

With each chest compression the hands are highlighted; the ET tube highlights in blue when a breath is delivered



**Intubated CPR Ventilation Waveforms**



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