![O_two controlled™ ventilation]

O-Two Self-Study Guide

e500 Transport Ventilator Ventilation Modes
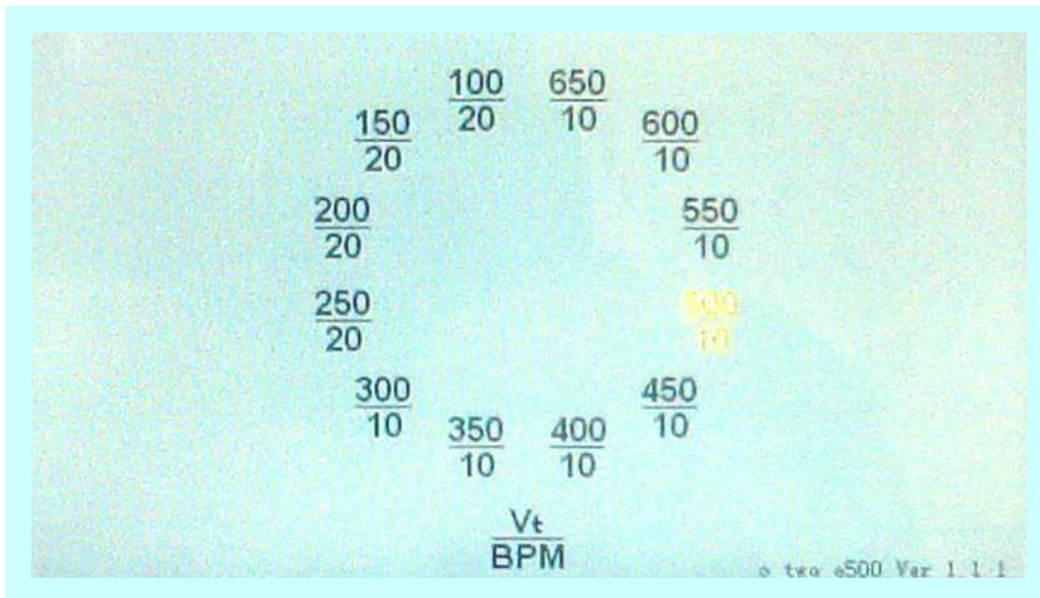
E500 VENTILATION MODES

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.

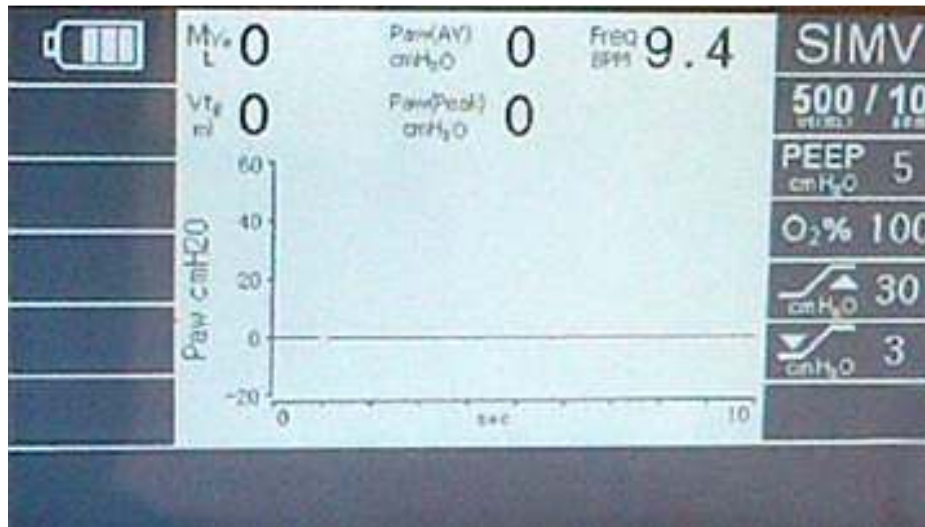There are 12 tidal volume/rate options on the startup screen:

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.

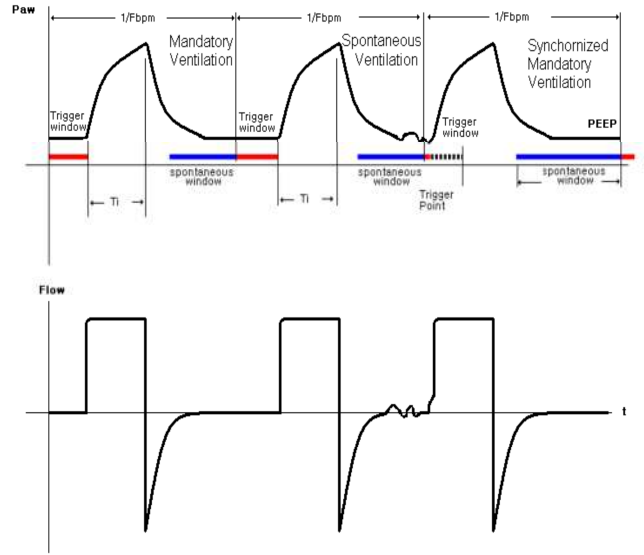# 2. Synchronized Intermittent Mandatory Ventilation – (SIMV)

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

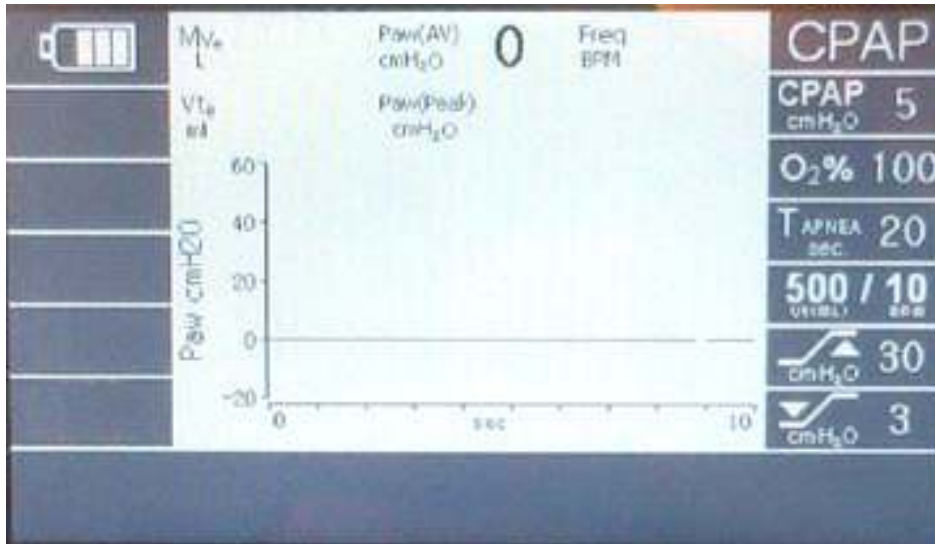| Parameter	Range	Default
Tidal Volume/ Rate	100/20,150/20, 200/20, 250/20, 300/10, 350/10, 400/10, 450/10, 500/10, 550/10, 600/10, 650/10	500/10 or selected by user during start-up
I:E ratio	1:2	1:2
PEEP	0, 4, 5, 6, 7, 8, 9, 10, 12, 15, 18, 20	5
Trig.	3 L/min	3 L/min
O_2 %	(100% or 60%)	100%
P max.	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.
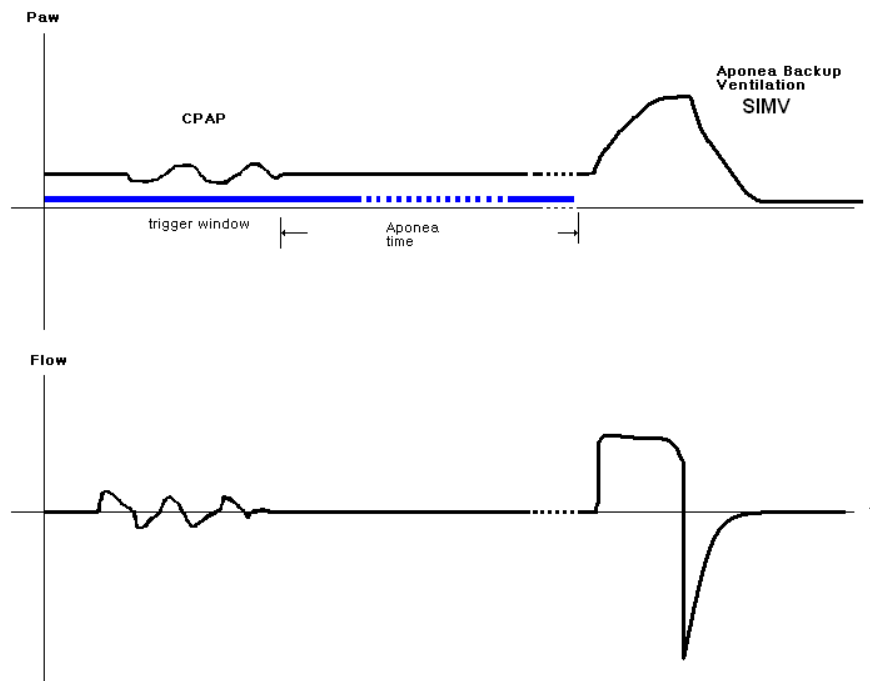

Screen display for CPAP mode

Default Ventilation Setting – CPAP

Parameter	Range	Default
CPAP (cm H_2O)	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_2 %	(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

NOTE: Refer to the product manual for further definitions and descriptions of function.   Rev 0. 23_08_2017

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%.
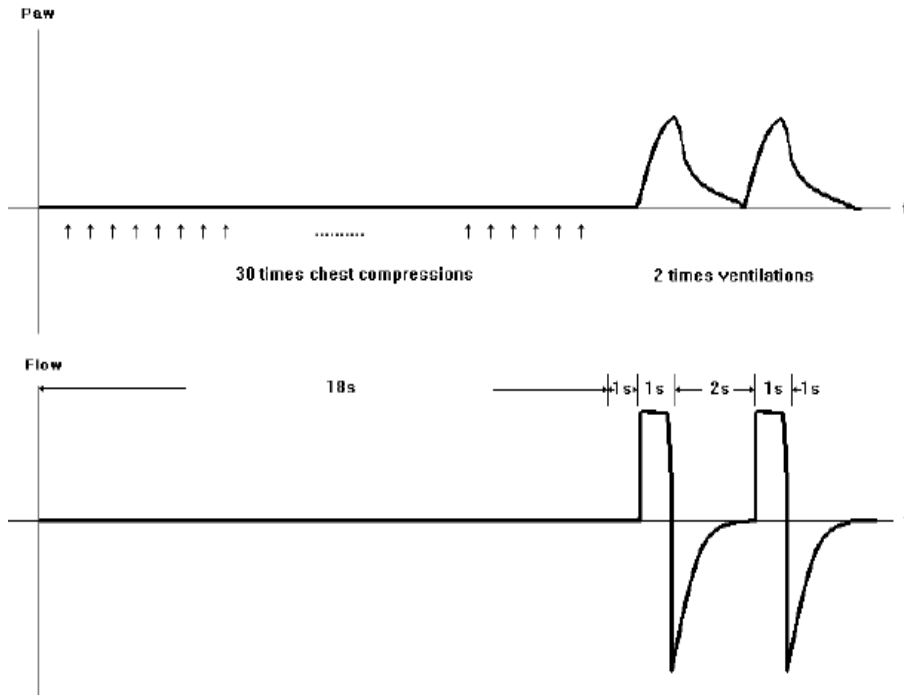
Default Ventilation Setting- CPR

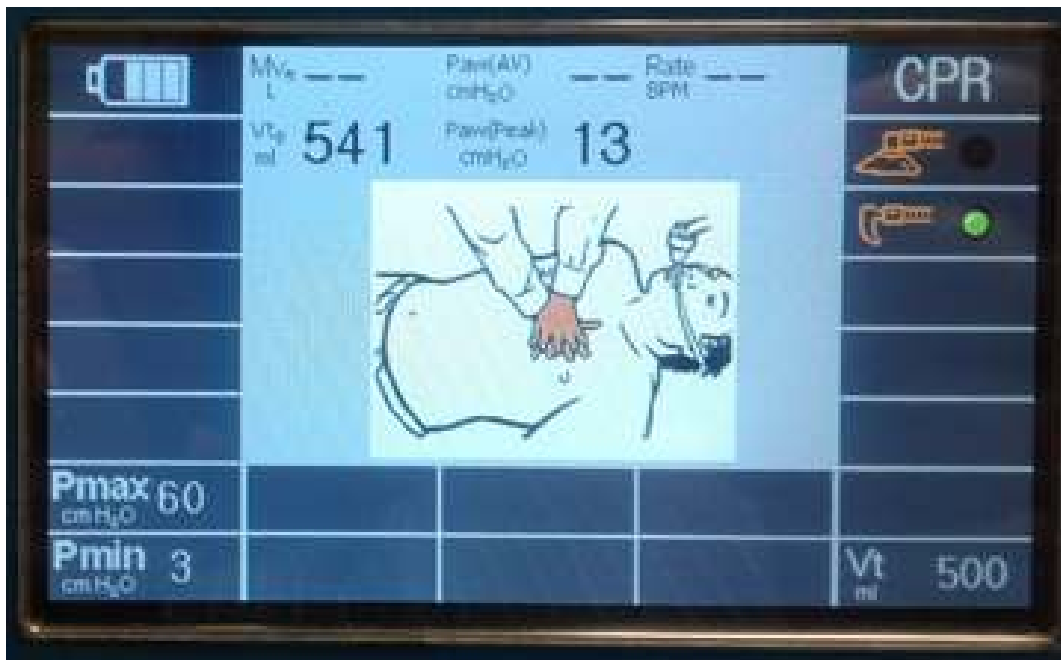| Parameter	Range	Default
Tidal Volume	100,150, 200, 250, 300, 350,400, 450, 500, 550, 600, 650	Carry over from previous mode
P max.	10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 80	Carry over from previous mode
P min.	0, 2, 3, 4, 5, 6, 7, 8, 10, 12, 15, 20	Carry over from previous mode
O_2 %	100%	100%

Mask Ventilated Patient
Basic Airway – 30:2

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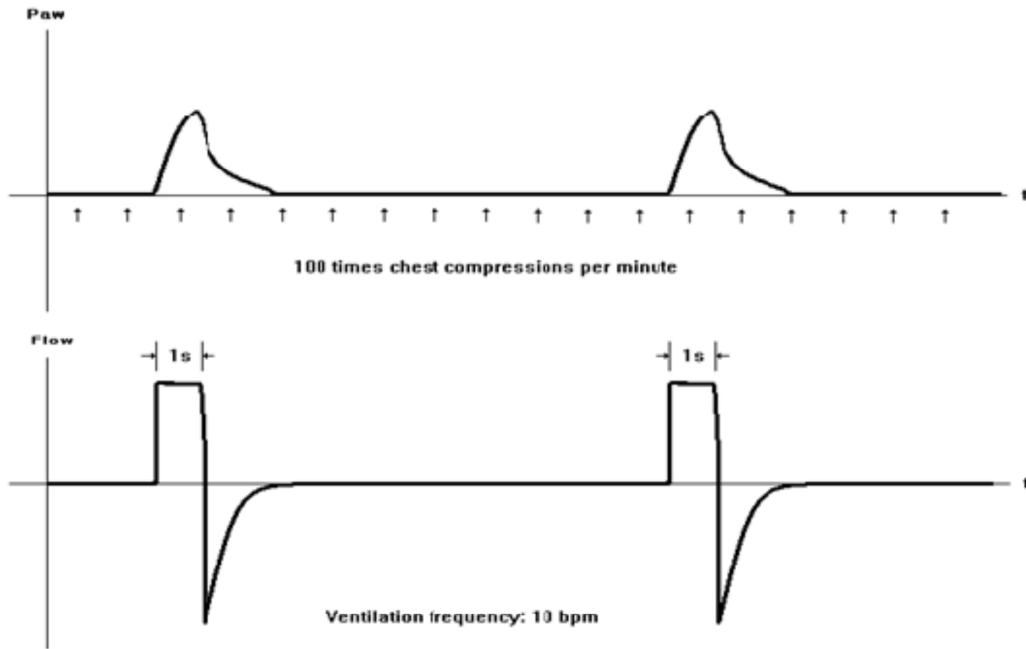**the mask highlights in blue when a breath is delivered.**

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

Paw

100 times chest compressions per minute

Flow

1s

1s

Ventilation frequency: 10 bpm

<u>Intubated CPR Ventilation Waveforms</u>

NOTE: Refer to the product manual for further definitions and descriptions of function.   Rev 0. 23_08_2017