# Addendum 1 e360T and e360T+ Model

Congratulations on your purchase of the Newport<sup>™</sup> e360T Ventilator.

This package includes an addendum to the Newport e360 Ventilator Operating Manual that describes the features that are unique to the T model.

Please insert this addendum into the back of the Newport e360 Ventilator Operating Manual OPR360U.

If you have any questions or need additional information please contact us. 1.800.451.3111 (US Only) +1.714.427.5811 email: info@ventilators.com

# **Manual Revision History**

| Rev A | June 2009     | New release  |
|-------|---------------|--|
| Rev B | December 2012 | Updated PV Maneuver instructions to reflect software updates |

# Addendum 1: e360T and e360T+ Model

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\*T+ Model only

This addendum section describes the additional features that are found on the Newport<sup>™</sup> e360 T Model and e360 T+ Model ventilators. Please refer to the operating manual, OPR360U, for complete listing of warnings, cautions and information on the proper use and operation of the Newport e360 ventilator.

### Introduction

The Newport e360 ventilator T and T+ models offer the same features and specifications found on the Newport e360E ventilator model with these additional features.

- External Touch Screen Capability
- Pressure Volume (PV) Maneuver Function
- Three Waveforms Displayed on One Screen
- Real Time I:E ratio Pop-up Window
- Expanded Pressure Trigger Range (e360 T+ Model only)

## **External Touch Screen Capability**

An additional communication port (COM1) on the rear panel allows an external touch screen monitor to be connected with the e360 ventilator. When it is connected, the external touch screen monitor allows the user to make changes to the ventilator from the external monitor or from the built in Graphical User Interface (GUI). Both displays function identically. Instructions for mounting the external touch screen are found at the end of this addendum.

### **PV Maneuver Function**

A Pressure Volume (PV) Maneuver is available for assessing lung dynamics by using a pressure volume curve which is recorded during a controlled slow inflation. This feature is accessed by touching the *PV Maneuver* button on the *Technical* screen.

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Figure 1. TECHNICAL screen showing location of PV Maneuver button

#### How To Perform a PV Maneuver

- 1. Press the Setup & Calibration menu button on the control panel.
- 2. Touch TECHNICAL. (See Figure 1)
- 3. Touch PV Maneuver button to access the function.
- 4. At the end of a complete exhalation, touch and hold the *PV Maneuver* button for an appropriate period of time while carefully observing the patient.
- 5. Release the *PV Maneuver* button to stop the maneuver.
- 6. Assess the Pressure Volume loop. The screen can be saved to memory by touching the *SAVE* button. See Figure 2.
- 7. Touch START to resume normal plotting on the screen.

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Figure 2. LOOPS screen showing graphical results of PV Maneuver

#### **Explanation of PV Maneuver**

After the PV Maneuver screen is accessed the following conditions occur:

- Normal ventilation continues but a three minute timing window opens within which the user may perform a PV Maneuver.
- The screen automatically changes to the Loops screen with a Pressure Volume loop.
- The message "Press and hold "PV Maneuver" to Perform" appears in the message bar.

The user may perform a PV Maneuver by touching and holding the *PV Maneuver* button. While the *PV Maneuver* button is touched, normal ventilation is interrupted while a low flow (2 L/min) is delivered to the patient.

The maneuver ends and normal ventilation resumes when the user releases the *PV Maneuver* button, when the high pressure alarm limit is violated, when airway pressure reaches 60 cmH<sub>2</sub>O/mbar, or when 90 seconds elapse, whichever comes first.

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When the *PV Maneuver* button is released and/or the breath cycles to exhalation:

- The ventilator resumes normal ventilation;
- The Pressure Volume loop freezes;
- The scrollable cursor is displayed;

The message "PV Maneuver Completed / Move Cursor to Inflection Point" appears in the message bar. Touch *SAVE* to store the image, touch *START* to resume plotting or press any button to exit this screen.

#### Three Waveforms Displayed on One Screen

An additional selection for the *WAVES* button allows you to display three waveforms simultaneously (Pressure, Volume and Flow). Touch the *WAVES* button repeatedly until the three waveforms appear on the screen. See Figure 3. For more details regarding the *Waves* display feature see Section 4, pg 4-13, Waves and Loops Display.



Figure 3. WAVES screen displaying Pressure, Volume and Flow waveforms

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#### Real time I:E Ratio Pop-up Window

While the user is in the process of adjusting *Resp Rate, t insp, Flow, Pause* or *Tidal Volume*, the calculated I:E ratio is displayed in realtime in a "pop-up" window that appears in the middle of the touch screen. It disappears when *Accept* is pressed or 10 seconds elapses without a control adjustment, whichever comes first. See Figure 4.



Figure 4. I:E Ratio "Pop-up" Window

# **Expanded Pressure Trigger Range\***

On the e360 T+ model, the lower end of the pressure trigger range is expanded to minus 20 cmH<sub>2</sub>O/mbar (standard P trig is -5 cmH<sub>2</sub>O/ mbar). Trigger sensitivity should be set as sensitively as possible without auto-triggering during ventilation and only set to insensitive values when needed to assess the patient's inspiratory effort capabilities.

\* T+ Model only

## **Connecting the External Touch Screen Monitor**

- Mount the external touch screen monitor (FPD2126A) to the top of the e360 Ventilator. Instructions are included in the assembly kit.
- Connect the two cables from the touch screen monitor to the appropriate ports on the rear panel of the e360 Ventilator. The VGA cable (15 pin male) connects to the VGA communication port. The RS-232C cable (9 pin female) connects to the COM1 communication port. See Figure 5.



Figure 5. Rear panel of the e360 with external touch screen cables attached