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Overview

Simulab’s Virtual Patient Monitor is a software system that adds realism to your simulation training events by providing a virtual patient monitor that is fully customizable and updates for real time on-the-fly training. Instructors are able to create a variety of clinical events during a simulation to heighten drama and create a high-stakes environment.

The easy-to-use and intuitive interface of the Instructor View controls a customizable Student View monitor. The Student View displays a comprehensive set of basic physiological vital measurements. Instructors can change any of the standard vitals over a desired trend time or even create custom indicators, depending on the simulation.

The Instructor View operates on a standard PC and the Student View can be displayed on a connected monitor. The Virtual Patient Monitor can be coupled with any product to escalate procedural realism.

PART #VPM-10
Features and Benefits

» Easy-to-use controls for quick set up.
» Standard and customizable vitals for maximum flexibility.
» Create on-the-fly scenarios to easily adjust to student and training needs.
» Select from stable and unstable patient cardiac rhythms for instant access to variable patient conditions.
» Set trend time for new settings to take effect to increase realism and escalate student immersion.
» Ability to add two custom vital signs that are unique to a simulation.
» Alarms sound and blink to visually alert students and can be silenced with a simple click.
» Create and save patient profiles for easy scenario set up.
» Running log of events can be exported to a text document for review at the end of a session.
» Runs on any standard PC.

Waveforms Available

<table>
<thead>
<tr>
<th>Heart Rhythms</th>
<th>Normal Sinus Rhythm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Atrial Fibrillation</td>
</tr>
<tr>
<td></td>
<td>Ventricular Tachycardia</td>
</tr>
<tr>
<td></td>
<td>Ventricular Fibrillation</td>
</tr>
<tr>
<td></td>
<td>Pulseless Electrical Activity</td>
</tr>
<tr>
<td></td>
<td>Multifocal Atrial Tachycardia</td>
</tr>
<tr>
<td></td>
<td>Complete Heart Block with Narrow Escape</td>
</tr>
<tr>
<td></td>
<td>Complete Heart Block with Wide Escape</td>
</tr>
<tr>
<td></td>
<td>Supraventricular Tachycardia</td>
</tr>
<tr>
<td></td>
<td>Asystole</td>
</tr>
<tr>
<td></td>
<td>2nd Degree Heart Block Type II Mobitz</td>
</tr>
<tr>
<td></td>
<td>3rd Degree Heart Block</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Blood Pressure</th>
<th>Systolic and Diastolic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arterial and Non-Invasive</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EtCO2</th>
<th>Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rebreathing</td>
</tr>
<tr>
<td></td>
<td>Obstructive</td>
</tr>
<tr>
<td></td>
<td>Curare Cleft</td>
</tr>
</tbody>
</table>
Quick Start Guide

1. **LOCATE THE USER GUIDE**
   Find the VirtualPatientMonitor User’s Guide located inside the software case. This contains detailed information for the set-up, procedures, and troubleshooting steps for your new software.

2. **SET UP FOR TWO MONITORS**
   The VirtualPatientMonitor is meant to work best with a dual monitor set-up. The instructor interface will be controlled from your PC, and the Student View can be viewed on any connected monitor. Set up your system with an extended monitor and external speakers, a HDMI connected TV screen with sound capabilities, or even a Bluetooth extended monitor.

3. **INSTALL THE SOFTWARE**
   Insert the software CD and follow the installer instructions to install the software on your system. Remember to keep your installer disk which contains the License Key Code for your software version.

4. **ENTER LICENSE KEY CODE**
   Launch the application from the desktop icon. Upon opening, a window will prompt you to enter your License Key Code. Your key code is located in the software CD case. Enter the code in the field and click **OK**.

5. **CUSTOMIZE THE STUDENT VIEW**
   On the Instructor screen, click the **Customize** button on the **Student View** tab to choose the student monitor configuration, the display colors, and set high and low alarm parameters.

6. **CREATE PATIENT PROFILE**
   Click the **Patient Profile** tab. Click **New** and create a case name and patient description as well as record any notes or information regarding the simulation session. This information can later be exported with the session log, saved in a text file and reviewed.

7. **START YOUR SCENARIO**
   Choose a stable or unstable patient, choose a cardiac rhythm. Refine heart rate, blood pressure and SpO₂ measurements using the sliders or the text boxes. Choose the EtCO₂ condition, adjust temperature and respiration rate if desired. Press the **Start/Update Session** button.
Installing the Software

System Requirements:
- Windows Vista sp2 or higher
- Vista, Windows 7, Windows 8
- 512MB RAM
- Disk space:
  - 850GB on 32 bit systems
  - 2GB on 64 bit systems (Disk space only required if .net 4.5 is not already installed. If it is then the VPM app requires less than 2 MB of disk space.)

Note: The Laptop and Monitor are not included.

To Install the VirtualPatientMonitor Software:

1. Insert the VirtualPatientMonitor CD. The Welcome screen appears. Click Next to begin installation.

2. The Select Installation Folder window appears. Select the desired target location for installation. Click Next to continue the installation.

3. Confirm installation by clicking Next. The software will install.

4. Click Close to quit the installer.

5. A VirtualPatientMonitor desktop icon will be added to the desktop.

Note: Be sure to configure your computer for a second monitor. To do so, go to the Control Panel, find the Display Settings and set up to extend to a second monitor.
To Launch the VirtualPatientMonitor Software:

1. Double-click the VirtualPatientMonitor desktop icon. The Instructor window appears.

2. Upon opening, the software determines if there is a second screen connected. If so, the Student View window is automatically sent to the extended screen for display. The Instructor View will remain on the main screen.

Note: The Student View initially opens with no vital measurements displayed.
UI at a Glance – Instructor View

The Instructor View allows the instructor to create “on-the-fly” scenarios that will display on the Student View monitor window. Instructors can control a variety of vital signs, customize Student View display, add custom vitals as well as select from preset cardiac rhythms and conditions.

1 Multi-view Tabs: The Log Tab displays a running log of the simulation, the Student View Tab provides a live view of student monitor, and the Patient Profile Tab allows you to enter or edit a patient profile.

2 Customize Button: Configure the Student View screen including vital colors, alarm parameters, and units of measurement.

3 Student View Tab: Provides a live Student View of data on the Instructor screen. Updates as changes are made.

4 Trend Time: Sets a time for the newly chosen settings to move into effect. The trend time begins when Start/Update Session is pressed.

5 Silence/Sound Button: Toggle alarms to sound or silence when any of the vital measurements move out of the customizable high and low alarm parameters.

6 Hide/Show Button: Show or hide the data on the Student View.

7 Start/Update Button: Begins the simulation session and initiates any changes made to measurement values.
Temp: Enter the desired temperature settings. The units of measurement can be customized to represent Fahrenheit or Celsius in the Customize window.

Resp: Enter the desired Respiration settings.

Run Time: Displays run time for the current simulation session.

Pause Session Button: Enables the user to pause the session for a teachable moment, and unpause to resume the simulation.

New Session Button: Resets the running session to begin a new session, bringing the run time back to 00:00 and resets the log.


Cardiac Rhythms: Select from a stable or unstable patient, choose a cardiac rhythm and the HR, BP and SpO₂ settings will auto populate accordingly.

HR/BP/SpO₂: Enter desired vital measurements—via textbox or slider—and whether the wave displays on the Student View. For NIBP uncheck the box beneath the waveform.

Conditions: Select from pre-set breathing conditions to auto-populate EtCO₂ settings.

EtCO₂: Enter desired measurement value using the slider or textbox.

Custom Stats: Add two additional custom physiological measurements to be displayed on the Student View.

UI at a Glance – Student View

The Student View displays the vitals that have been set in the Instructor View. The Student View can be programmed to display a variety of settings including a standard monitor, numbers and EKG or just numeric to mimic a variety of patient monitors.

Instructors can control a variety of vital signs as well as select from preset arrhythmias and conditions, as well as whether alarms sound or vitals blink when outside alarm parameters.
To Enter the License Key Code:

1. Upon the first launch of the software, a license window will appear.

2. Enter the License Key Code provided with your software disc, and click **OK**.
Customizing the Student View Parameters

The Virtual Patient Monitor allows you to simulate a variety of patient monitor configurations as well as customize the colors displayed for the individual vital measurements and waveforms. The application also enables you to customize low and high alarm parameters for each vital that will trigger alarm sounds and visual blinking indicators when the vitals are out of the set parameters.

Additionally you are able to define units of measurement for the vitals that will be displayed on the Student View. For convenience, these choices will then become the default setting for each subsequent opening of the software until they are updated if needed.

To Customize the Student View Parameters:

1. In the Instructor View, select **Customize** from the Student View tab.

2. The Student Monitor Configuration screen appears.
3. Select the type of Monitor view to display on the Student View window. Choices include Standard Monitor, Numerics and ECG, and Numerics Only.

**OPTION 1: STANDARD VIEW**

**OPTION 2: NUMERICS AND ECG**

**OPTION 3: NUMERICS**
4. Select the color for each of the vitals that will be displayed on the Student View window. This choice changes the color displayed for both the measurement value and waveform on the Student View.

<table>
<thead>
<tr>
<th>Vitals</th>
<th>Colors</th>
<th>Alarm Parameters</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>Green</td>
<td>Low 30</td>
<td>High 220</td>
</tr>
<tr>
<td>Systolic BP</td>
<td>Red</td>
<td>Low 90</td>
<td>High 140</td>
</tr>
<tr>
<td>Diastolic BP</td>
<td>White</td>
<td>Low 60</td>
<td>High 100</td>
</tr>
<tr>
<td>SpO2</td>
<td>Blue</td>
<td>Low 80</td>
<td>High 101</td>
</tr>
<tr>
<td>ETCO2</td>
<td>White</td>
<td>Low 0</td>
<td>High 0</td>
</tr>
<tr>
<td>RESP</td>
<td>White</td>
<td>Low 10</td>
<td>High 100</td>
</tr>
<tr>
<td>TEMP</td>
<td>Yellow</td>
<td>Low 96</td>
<td>High 105</td>
</tr>
</tbody>
</table>

5. Set the Low and High Alarm Parameter settings for each of the vitals. Alarms will sound and vitals will blink when outside of set parameters during the simulation.

<table>
<thead>
<tr>
<th>Vitals</th>
<th>Colors</th>
<th>Alarm Parameters</th>
<th>Units</th>
</tr>
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<tr>
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<td>High 220</td>
</tr>
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</tr>
<tr>
<td>SpO2</td>
<td>Blue</td>
<td>Low 80</td>
<td>High 101</td>
</tr>
<tr>
<td>ETCO2</td>
<td>White</td>
<td>Low 0</td>
<td>High 0</td>
</tr>
<tr>
<td>RESP</td>
<td>White</td>
<td>Low 10</td>
<td>High 100</td>
</tr>
<tr>
<td>TEMP</td>
<td>Yellow</td>
<td>Low 96</td>
<td>High 105</td>
</tr>
</tbody>
</table>

6. Set the Unit of Measurement desired for each of the vitals if they differ from the defaults.

<table>
<thead>
<tr>
<th>Vitals</th>
<th>Colors</th>
<th>Alarm Parameters</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>Green</td>
<td>Low 30</td>
<td>High 220</td>
</tr>
<tr>
<td>Systolic BP</td>
<td>Red</td>
<td>Low 90</td>
<td>High 140</td>
</tr>
<tr>
<td>Diastolic BP</td>
<td>White</td>
<td>Low 60</td>
<td>High 100</td>
</tr>
<tr>
<td>SpO2</td>
<td>Blue</td>
<td>Low 80</td>
<td>High 101</td>
</tr>
<tr>
<td>ETCO2</td>
<td>White</td>
<td>Low 0</td>
<td>High 0</td>
</tr>
<tr>
<td>RESP</td>
<td>White</td>
<td>Low 10</td>
<td>High 100</td>
</tr>
<tr>
<td>TEMP</td>
<td>Yellow</td>
<td>Low 96</td>
<td>High 105</td>
</tr>
</tbody>
</table>

7. Click **OK**. The new parameters will appear on the Student View window.
Creating Patient Profiles

The Patient Profile tab allows the user to create a patient profile which includes a Case Name and Description. This profile can be saved and used in future simulations. Once saved, it will appear in a pull-down menu along with any other profiles that are saved. The selected profile will be appended to the log file for reference and for use in debriefing sessions. The user can also use the description area to enter any information or notes to keep as a record for future simulations.

To Create a Patient Profile:

1. In the Instructor View, select the Patient Profile tab.

2. Click New. The Edit Patient Profile dialog box appears.

3. Enter a Case Name and Description for the patient.

4. Click OK. The new patient profile now appears in the pull-down menu.
To Edit a Patient Profile:

1. In the Instructor View, select the Patient Profile tab.

2. From the pull-down, select the patient profile to be edited.

3. Click Edit. The Edit Patient Profile dialog box appears.

4. Edit the Case Name, Description or add additional notes for the patient.

5. Click OK. The updated patient profile appears in the pull-down menu.

To Delete a Patient Profile:

1. In the Instructor View, select the Patient Profile tab.

2. From the pull-down, select the patient profile to be deleted.

3. Click Delete. A delete confirmation screen appears.

4. Click Yes to permanently delete the profile. The patient profile is deleted from the pull-down menu.
Viewing the Log

The Log tab captures all the vital changes measured during the Run Time of a simulation, including the details of the selected Patient Profile. The log tab can be opened during the simulation session and the running log can be viewed. At the end of the simulation session the log file can be exported and saved as a text file on your computer for future reference. To learn how to export the log, see “To End a Simulation Session and Export the Log File:“ on page 26.

The Log is a rolling record of the activity in a simulation session. Each update is logged on the top, so when viewing the Log, note that the first action will be at the end of the Log and each subsequent update on top of that. In the printed Log, the top of the page will reflect the end of the simulation and work its way back to the first action.

NOTE: The Log file is not stored within the software. Once you click New Session to clear the software for a new simulation, the Log is deleted. To store the Log file, you need to export it and save it on your computer.

To View the Log:

1. Click the Log tab in the Instructor View. Slide the scroll bar at the bottom of the screen, if it appears, to view the entire Log file.
Creating Custom Vitals

Two custom vitals are available and located in the yellow section on the Instructor View. You are able to create any two custom vital measurements by entering a custom name in the text box, and a measurement value in the text input field. Click the ON box and the custom vital will display on the Student View the next time you click the New/Update Session button.

To Create a Custom Vital:
1. Insert your cursor in one of the two Custom name fields. Enter the desired name.
2. Enter the desired starting measurement.
3. Check ON to display the new vital measurement on the Student View.

NOTE: Custom Vitals do not, by default, display on the Student View.
## Starting a Simulation Session

Once you have customized the Student View window and created or selected a Patient Profile, you are ready to start the simulation.

From here you move forward to choose a stable or unstable patient, choose a cardiac rhythm, and if desired manually refine each value measurement individually to create the initial data parameters of your patient.

Choosing a preset rhythm will auto populate a set of measurements across the HR, BP, SpO₂ and respiration, which represent general values associated with the rhythm. Each rhythm choice will also display a waveform representative of that condition when the simulation begins.

The following table lists the defaults for each of the Cardiac Rhythm choices.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Rhythms</th>
<th>HR</th>
<th>BP</th>
<th>SpO₂</th>
<th>Resp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable</td>
<td>Normal Sinus Rhythm</td>
<td>80</td>
<td>120/80</td>
<td>99</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>A-Fib</td>
<td>130</td>
<td>105/65</td>
<td>99</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>V-Tach</td>
<td>180</td>
<td>110/70</td>
<td>95</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Multifocal A-Tach</td>
<td>120</td>
<td>130/70</td>
<td>80</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Complete Heart Block with Narrow Escape</td>
<td>40</td>
<td>120/80</td>
<td>95</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Supraventricular Tachycardia</td>
<td>180</td>
<td>100/70</td>
<td>95</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>3rd Degree Heart Block</td>
<td>30</td>
<td>80/46</td>
<td>88</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>2nd Degree Heart Block Type II Mobitz</td>
<td>35</td>
<td>70/48</td>
<td>90</td>
<td>14</td>
</tr>
<tr>
<td>Unstable</td>
<td>Asystole</td>
<td>0</td>
<td>0</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>A-Fib</td>
<td>140</td>
<td>85/50</td>
<td>89</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>V-Fib</td>
<td>200</td>
<td>15/7</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>V-Tach</td>
<td>220</td>
<td>70/40</td>
<td>--</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>PEA</td>
<td>130</td>
<td>--</td>
<td>--</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Complete Heart Block with Wide Escape</td>
<td>30</td>
<td>70/40</td>
<td>--</td>
<td>24</td>
</tr>
<tr>
<td></td>
<td>Supraventricular Tachycardia</td>
<td>180</td>
<td>80/50</td>
<td>90</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>ST Elevation</td>
<td>80</td>
<td>120/80</td>
<td>99</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>ST Depression</td>
<td>80</td>
<td>120/80</td>
<td>99</td>
<td>14</td>
</tr>
</tbody>
</table>

**NOTE:** If a vital measurement is undetectable it is displayed as --.
You can use these presets with their default measurement values, or you can use them as a starting point and then make manual refinements to more closely match the scenario you are planning.

**To set the initial vitals for your scenario:**

1. Select one of the Cardiac Rhythms from either the Stable or Unstable tab.

   ![Cardiac Rhythms](image)

   - **Stable:** Normal Sinus Rhythm, A-Fib, V-Tach, Multifocal A-Tach, Complete Heart Block with Narrow Escape, Supraventricular Tachycardia, 2nd Degree Type II Mobitz HB, 3rd Degree Heart Block

   - **Unstable:**

2. Optional. Edit the default values for rhythm vitals by dragging the slider or entering a value into the text box of the HR, BP or SpO₂ vital measurement.

3. For NIBP, uncheck the box below the BP waveform.

   ![Vital Measurements](image)

   - **HR:** 30 to 220
   - **BP:** 0 to MAX, 120 to 80
   - **SpO₂:** 0 to 100

**NOTE:** The Blood Pressure slider links the systolic and diastolic through a calculation of the MAP (mean arterial pressure) formula. You can link ([link](#)) and move within this range, or unlink ([unlink](#)) and refine the systolic and diastolic individually.
4. Select one of the EtCO₂ Conditions. This preset Condition will determine the waveform that is displayed.

![EtCO₂ Conditions](image)

5. Set the starting values for Temperature and Respiration rate.

![Temperature and Respiration](image)

6. Optional. To create up to two additional vital measurement inputs, enter a name in the Custom field and then enter the desired measurement. These do not, by default, display on the Student View. Check ON to display the new vital measurement on the Student View.

![Custom Measurement](image)

7. Optional. If you choose to not display any vital on the Student View, uncheck the ON check-box and that individual vital measurement will no longer display.

8. When you are ready to begin, click Start/Update Session. The chosen measurement values and representative waveforms will appear on the Student View window. If any settings are outside the alarm parameters, an alarm will sound and those vitals will blink.

**NOTE:** You can silence the alarms by selecting the Silence/Sound button.
Setting the Trend Time

The Trend Time reflects the rate at which your newly chosen values will move into effect. For instance if you change the heart rate from 80 bpm to 120 bpm, choose a 20 second trend time and update; the heart rate will slowly move from 80 bpm to 120 bpm over a 20 second period.

To Set the Trend Time:

1. In the Instructor View, drag the Trend Time slider to the desired time for the trend to take effect.

2. When you are ready to trend in the new vitals, click Start/Update Session. The vitals will trend in over the time selected.
Changing a Simulation Session On-the-Fly

While a simulation is in session, the instructor can change the conditions of the patient by either selecting a new Cardiac Rhythm preset or manually adjusting the individual vital values. If desired, the instructor can also set a Trend Time for those updated settings to take effect. During the Trend Time, the various vitals will change incrementally until the Trend Time is complete.

To Change a Simulation Session On-the-fly:

1. Alter one or more of the vitals on the Instructor View. This might include:
   a. Selecting one of the preset Cardiac Rhythms under the Stable or Unstable tab.
   b. Altering one or more of the vitals by dragging the slider next to or entering a value into the text box beneath the appropriate vital.
   c. Altering the values for EtCO₂.
   d. Selecting one of the preset EtCO₂ conditions.
   e. Changing the measurement values for Temperature and/or Respiration.
   f. Altering the data and values of one or both of the custom vitals.

2. Optional. Enter the Trend Time.

3. When you are ready to engage your changes, click Start/Update Session.

4. The entered values will appear on the Student View window immediately or will trend in according to your chosen trend time. If any settings are outside the alarm parameters, an alarm will sound and those vitals measurement values will blink.
Pausing and Resuming a Simulation Session

The scenario can be paused at any time during the simulation session. Pausing allows the instructor to freeze all the settings on the Student View, stop the Run Time clocks. At any time during the simulation session, if the instructor observes a teachable moment, the simulation can be paused and then un-paused to resume the current session without affecting the logged session.

To Pause/Resume a Session:

1. Click the **Pause Session** button.

2. The following are all frozen:
   a. The simulation session
   b. The movement of waveform presentation on the Student View
   c. The Run Time clock

3. To resume the simulation session either:
   » Press **Pause Session** a second time, or
   » Press the **Start/Update Session** button.
Showing and Hiding the Student View

The Student View displays automatically when you launch the application. If a second monitor is detected, it will automatically display in the second monitor. It can be moved manually back to the original monitor if desired. If at any point the instructor would like to hide the Student View activity, they can use the Hide/Show button.

To Hide/Show the Student View:

1. Click the Hide/Show button.

2. The following behavior will be observed:
   a. The Student View will toggle between either displaying or hiding the Student View window.
   b. When the button is pressed to Hide, the Student View screen goes black with the exception of the Time/Date stamp and Run Time.

3. Restore the Student View by pressing Hide/Show a second time.

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**NOTE:** The simulation will keep running in the background when hidden unless the Pause Session button is pressed.
Sounding and Silencing Alarms

The VirtualPatientMonitor has realistic sounds which include an ECG blip, an Asystole alarm, and an alarm to alert the students that a vital measurement value has moved outside of the predetermined high and low parameters. The alarm parameters can be set for each individual vital through the Customize Button on the Student View tab (See “Customizing the Student View Parameters” on page 11). You can silence or sound all sounds and alarms in the Instructor View at any time during the simulation.

To Silence/Sound alarms:

1. Click the Silence/Sound button. All of the alarms as well as the ECG blip will fall silent.

2. Restore all sound by pressing Silence/Sound a second time.
**Ending a Scenario**

When you have come to the end of a scenario session, you can end the scenario and export the Log file that has recorded the Patient Profile, the original scenario settings as well as every change that is made during the scenario. This is exported into a text file that you can import into any text editor for review and printing.

**To End a Simulation Session and Export the Log File:**

1. Click the **Pause Session** button.

2. The following are all frozen:
   a. The simulation
   b. The movement of waveforms on the Student View
   c. The Run Time
   d. The Log

   **NOTE:** The pause action does not appear on the log.

3. Select the **Log** tab and click **Export**.

4. Save the file to the desired location. You can open this file in any standard text editor for review and printing.
Starting a New Simulation Session

Once you have paused your current simulation and exported the log file, you can reset the software for the next scenario session.

**To reset the Virtual Patient Monitor for a new scenario:**

1. Ensure that you paused the session and have exported your log file. (See “To End a Simulation Session and Export the Log File:” on page 26)

2. Click the **New Session** button. A confirmation message appears.

3. Click **OK** to end the current session and reset the system for a new scenario.

4. When you click the **New Session** button, the following occurs:
   a. Any current simulation ends.
   b. The log is reset.
   c. The system resets to the system default opening status (undetectable values).
   d. Note that the customizable settings and the patient profile do not reset. For your convenience these customized settings remain unchanged until they are edited by the user.

5. You are now ready to begin a new session. (See “Starting a Simulation Session” on page 18.)
Troubleshooting/FAQ

STUDENT VIEW (SIMULATED PATIENT MONITOR)

How do I customize the Student View?
» On the left side of the Instructor View, find the Student View tab, click on the red Customize button. This will open a window that gives you the option to choose a monitor configuration, select custom display colors and set the high and low alarm parameters.

How do I create a custom vital?
» Two custom vitals are available and located in the yellow section on the Instructor View. You are able to create any two custom vital measurements by entering a custom name in the text box, and a measurement value in the text input field. Click the On box and the custom vital will display on the Student View the next time you click the Update Session button.

Can I customize the color of the custom vitals?
» The custom vitals will always default to yellow and be displayed along the bottom of the screen.

What happens when I adjust the parameters for the alarms?
» The alarms can be set to sound with high and low parameters specific to each vital measurement in the Customize window. Then during the simulation session if the vitals move outside of the parameters, the alarms will sound and the value on the Student View will blink to indicate which vital is outside of set parameters.

When I customize the screen for a specific Patient Scenario, will it default to that each time I choose that patient?
» No, but the customizations made to the Student View will default to your custom parameters for every patient profile, unless changed. The customizations are not profile specific.

Can I go back to the default settings that came with the System?
» No, for convenience any changes made to the display colors or alarm parameters will be saved for any future opening of the application. There is not a way to reset to original defaults, but the customizations can be updated at any time to reflect new session needs.

How do I turn off the waveforms or vitals that I do not need?
» Each individual vital measurement can be turned off and be hidden from view. This is managed in the Instructor View by clicking the check mark in the On box next to the data input field. To remove from the Student View uncheck the box, and click...
the Update Session button. The waveform and measurement value will be removed from view. To turn back on, simply click the On box to check again and press update. The waveform and the measurement value will be displayed again.

When I start my simulation, I do not want the Student View to be on until they hook up the patient, how do I do this?
» The Hide/Show button allows you to show or hide the Student View display at any time during the simulation session. The Student View is in show mode by default. If you would like to hide the display, simply press the Hide/Show button and the display will be hidden until you press the Hide/Show button again. The Hide/Show button does not pause the simulation; it will still run in the background.

PATIENT PROFILE

Do I need to set up a Patient Profile?
» The Patient Profile is a tool for the instructor, providing space to notate any patient information, make notes and outline any session for reference. The Patient Profile is not needed to run the simulation.

How do I create and save my patient profile?
» To create a new Patient Profile, simply click the New button in the Patient Profile Tab. Enter a case name and any patient notes, vitals detail or session outline in the description box and click OK. This will save the Patient Profile. All saved Patient Profiles will be visible in the pull-down and can be accessed at any time.

The scenario portion of my Patient Profile does not appear to save, how can I recreate it?
» The scenario is not saved in the system, but the information can be exported with the log in a text file and reviewed for future simulations. The patient profile description area can also be used as a place to save notes or outlines to follow for future sessions.

How do I update my Patient Profile?
» Open the Patient Profile tab. In the pull-down, choose the patient profile that you would like to update. It will populate the description in the tab. Click the Edit button. This will open the window where you can make any revisions or updates needed. Click OK and it will save the new information.

MOVING THROUGH YOUR SCENARIO:

How do I start a simulation session?
» After you have customized the Student View as desired, and selected your rhythm, vital measurement and trend time. Then simply click the Start/Update Session button.
What happens when I choose a Cardiac Rhythm?
» The Cardiac Rhythm will update the Student View with a waveform representative of the chosen rhythm or arrhythmia. The rhythm choice will populate measurement values across the Heart Rate, Blood Pressure and SpO² that are representative of the individual condition. Before pressing the Start/Update button each of these measurements can be refined to suit the needs of your individual simulation session.

Can I adjust the vital measurement values after I choose a preset rhythm or condition?
» All vitals can be further refined from their preset values. Simply choose a rhythm, and use the sliders or text box to further refine the measurement values to suit your needs. Click the Start/Update Session button and the refined values will be displayed.

What does Trend Time mean?
» The Trend Time reflects the rate at which your newly chosen values will move into effect. For instance if you change the heart rate from 80 bpm to 120 bpm, choose a 20 second trend time and update; the heart rate will slowly move from 80 bpm to 120 bpm over a 20 second period.

I changed the vital measurement values and choose my trend time but nothing happens?
» All changes are initiated when the Start/Update session button is pressed.

What does Hide/Show mean?
» The Hide/Show button allows you to show or hide the Student View display at any time during the simulation session. The Student View is in Show Mode by default. If you would like to Hide the display simply press the Hide/Show button and the Display will be hidden until you press the Hide/Show button again. The Hide/Show button does not pause the simulation; it will still run in the background. This feature does not require you to press update.

How can I see what’s on the Student Monitor?
» On the left hand side of the Instructor View is a “live” Student View. Click on the Student View tab to display. This live view will display any measurement updates to the Student View enabling the instructor to focus on the session even when out of line of sight of the Student View monitor.

How can I see the running log?
» To view the Log at any time during the simulation simply click on the Log tab on the left hand side of the Instructor View. This will open the running log in place of the live Student View and you can scroll back to see all history of current session.

How do I know how long the session has been running?
» The run time clock is located on the top bar. This clock reflects the time of the
current simulation from the time the Start/Update Button was first pressed. The run time will pause at any time that the pause button is pressed. The run time will be reset with each new session.

**How do I stop the alarms from sounding?**
- Click the Silence/Sound button. The Silence/Sound button will silence the alarms and the ECG sound. Click a second time to sound the alarms. The alarm parameters can be changed in the Customize window.

**How do I end and save my simulation session?**
- To end a simulation session, simply press the Pause Session button located on the top bar. This will pause the session and allow you to export and save the log if desired. When you are ready for a new session, press the New Session button.

**What happens when I press the New Session button?**
- When you are ready to begin a new simulation session, press the New Session button on the top bar. A window will prompt you to ensure you are ready to end the current simulation and begin a new session. Choosing OK, will clear the log, reset the run time and prepare you to begin a new simulation.

**SIMULATION SESSION LOG:**

**How do I save and print this log?**
- The log can be exported and saved as a text file on your PC and printed from there. The log is not saved in the VirtualPatientMonitor application. In the log tab, click the export button. Follow the prompts to name and save the text file in a location of your choice on your PC. This text file can be printed and reviewed for future reference. The log annotates each change made with the update button and any information input into the patient profile description.

**Can I re-use this scenario for my upcoming training needs?**
- The log is not saved in the application, but you can use the saved file on your PC as a reference or guide for a future simulation. You can also save any scenario notes by adding to the Patient Profile description.

**Why does it start at the end when I print it?**
- The log is a rolling record of the activity in a simulation session. Each update is logged on the top, so when viewing the log, note that the first action will be at the end of the log and each subsequent update on top of that. In the printed log, the top of the page will reflect the end of the simulation and work its way back to the first action.