



SimPad System Frequently Asked Questions



**August 2012
Revision A**



TABLE OF CONTENTS

1	5 most common SimPad System questions	3
2	Software	4
2.1	<i>Automatic Mode</i>	4
2.2	<i>Manual Mode</i>	9
2.3	<i>Registering Interventions</i>	15
2.4	<i>Changing Parameters & Display</i>	15
2.5	<i>Event Log</i>	20
2.6	<i>Transferring files</i>	24
2.7	<i>Deleting, adding and rearranging themes and pre-designed scenarios</i>	24
3	SimPad System	26
3.1	<i>Link Box</i>	27
3.2	<i>SimPad</i>	29
3.3	<i>Battery</i>	30
3.4	<i>Patient Monitor (Hardware, Software, and License Keys)</i>	32
4	Operating System, Network, and Connectivity	34
5	Features	37
5.1	<i>Sounds</i>	37
5.2	<i>Rhythms</i>	40
5.3	<i>Blood Pressure</i>	41
6	SimDesigner	42
7	Theme Editor	42
8	SimCenter	43
8.1	<i>SimStore</i>	43
9	Scenarios	45
10	Services	45
10.1	<i>Technical/Warranty Issues</i>	47
11	Compatibility with Other Laerdal Products	48
12	Product Specifications & Certifications	49
13	Other	50



1 5 most common SimPad System questions

1) Q: Can I run SimPad software on my iPad?

A: No, the SimPad software must be run on a SimPad device.

2) Q: What products are supported by SimPad?

A: SimPad and Patient Monitor will support the following existing products as a separate system:

- ALS Simulator
- SimJunior
- SimNewB
- MegaCode Kelly (basic and advanced)
- MegaCode Kid (basic and advanced)
- Nursing Kelly
- Nursing Anne
- Nursing Kid
- Nursing Baby
- Sounds Trainer
- Arrhythmia Trainer
- Blood Pressure Trainer

3) Q: What is the battery life when fully charged?

A: Approximately 4 hours

4) Q: Can you use a headset with SimPad?

A: A headset can connect to SimPad to create two-way communication between the operator and the simulator and surroundings.

Plug an analogue headset (4 pin jack) into the SimPad. The microphone of the headset will now be routed to the manikin. If a microphone is connected to the Link Box as an alternative one, this microphone will now be routed to the headset.

The yellow button on the SimPad can be configured in the Preferences menu to enable and disable the input from the headset.

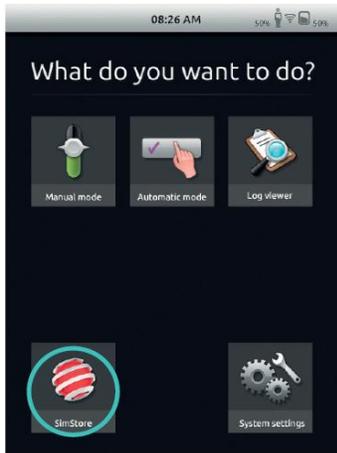
The headset output on the Link Box duplicates the sound to the manikin. It can be used to improve the sound by adding additional speakers around the manikin.



5) Q: How do I register my SimPad on SimStore?

REGISTERING SIMPAD ON SIMSTORE

To register SimPad on SimStore, it needs to be connected to a network with internet, either via wired Ethernet or a WiFi network.



- Touch the SimStore Icon on the start screen.
- Select institution, enter username and password and touch register.
- SimPad identifier will then automatically be transferred to SimStore and the device is registered on the selected account.

2 Software

2.1 Automatic Mode

Q: How do you run a scenario in Automatic Mode?

A: When running a scenario in Automatic Mode, the only task required by the instructor is to log the participant's actions. These events, when logged, as well as the events detected by the patient simulator, will drive the scenario forward. All events are registered in the log for post-event debriefing and analysis. Start by selecting a scenario. Here is an example:



Choose scenario

Folder of scenarios. Tap to open.

Circulation

Hemorrhage

Respiration

Morphine Overdose

Acute Severe Asthma

Last scenario used

Acute Severe Asthma

Select an automatic scenario.

Scenario description is divided into sections. Tap to open.

Acute Severe Asthma
Acute Severe Asthma.scx

Scenario Outline

Starting vital signs

Sinus	110	140/90 (74)	36	98.96	71
-------	-----	----------------	----	-------	----

The patient arrives to the Emergency Department in acute respiratory distress

Learner Brief

Learning Objectives

Equipment Checklist

START

Press START to enter session information.

Submit session information.

Session information
Scenario: Acute Severe Asthma 6. Feb 2012

Name session: Acute Severe Asthma 1

Instructor:

Participant 1:

Participant 2:

Participant 3:

CANCEL OK

Press OK when ready.



Review instructor information and press OK to continue.

The screenshot shows the SimPad interface with the following elements and annotations:

- Instructor information pop-up:** A smaller screenshot shows a pop-up window titled "Instructor information" with the text "Voice sounds: 'Can't breathe...'" and an "OK" button.
- Patient status information:** The main screen displays vital signs: Sinus 188, 120/80 (96), 12, 107, 99. Below this is the text: "Respiratory distress; The patient arrives to the Emergency Department in acute respiratory distress".
- Categories of interventions:** Three buttons labeled A, B, and C are shown. A is "Standards of care", B is "Compartment Syndrome", and C is "Call for help".
- Intervention list:**
 - Breathing:** Wash hands (44), Introduce self (00:05), Identify patient (0), Review Physician's orders.
 - CRM Skills:** Effective communication, **Didn't wash hands** (red button), Call for help (0).
- Annotations:**
 - "The 4-bar icon indicates that registering the intervention will launch pop-up." (points to the 4-bar icon on the "Wash hands" button).
 - "Some interventions must be performed within a specific time. Timer indicates remaining time." (points to the "00:05" timer on "Introduce self").
 - "Red button indicates a critical event." (points to the "Didn't wash hands" button).
 - "Counter keeps track of how many times an intervention has been logged." (points to the "0" next to "Call for help").
 - "Pause scenario" (points to the "PAUSE" button).
 - "A shadow arrow on the background indicates an event that will cause progress in scenario." (points to a shadow arrow on the "Identify patient" button).
 - "Log" (points to the "Log" button at the bottom left).



Touch anywhere on patient area to display more patient state information.

Current patient state

Patient state information

Select other parameters to adjust.

Log

Access to vital signs adjustments

Abnormal parameter values are displayed in this area.

Acute Severe Asthma

Respiratory distress

The patient arrives to the Emergency Department in acute respiratory distress.

Trends
severe resp distress (03:55)

Sinus	HR	SpO ₂
	111	77
RR	BP	Temp.
37	139/90 (106)	37.2

Muscle tone

Heart sound **Normal** 4

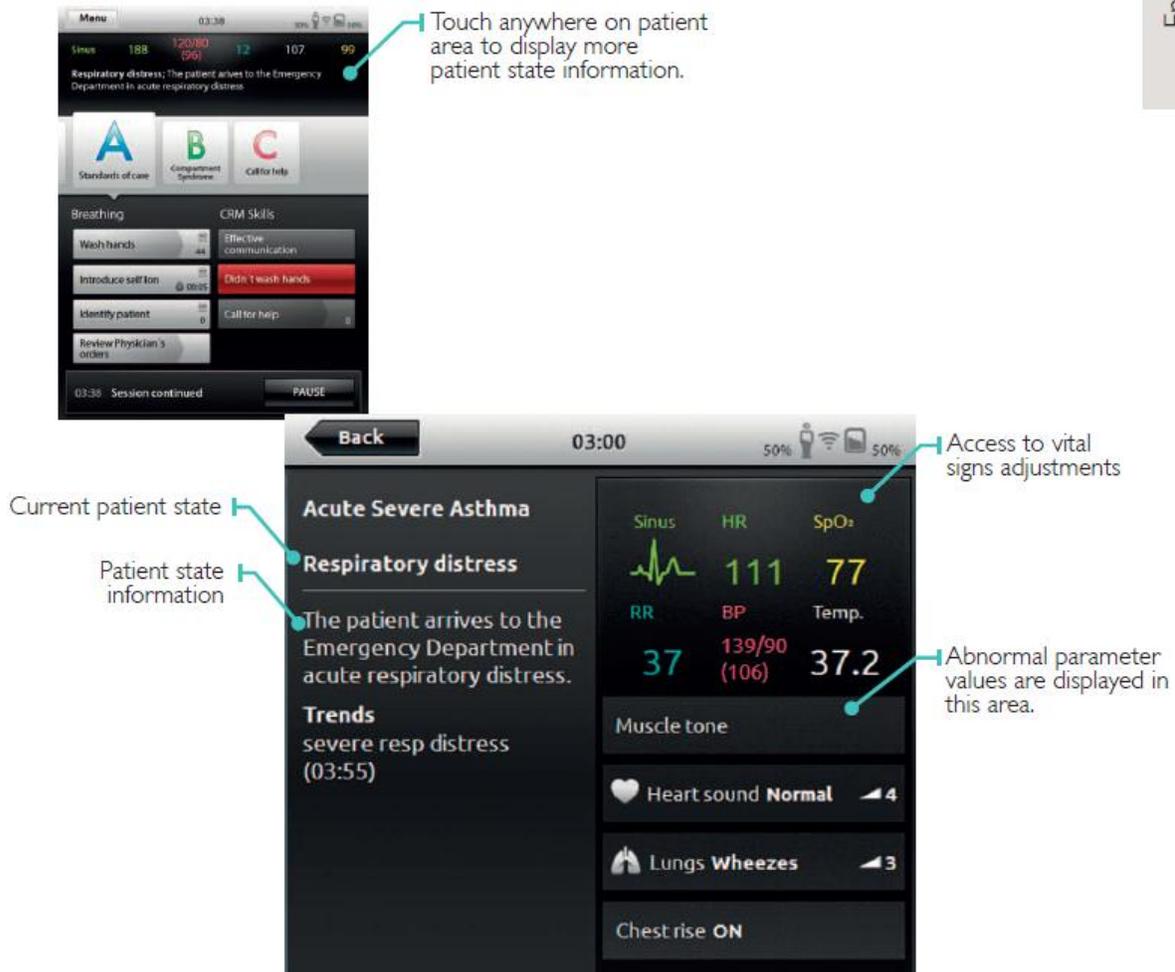
Lungs **Wheezes** 3

Chest rise **ON**

03:00 Session continued PAUSE



Q: Can I alter clinical (vital signs) when I am running in Automatic Mode?

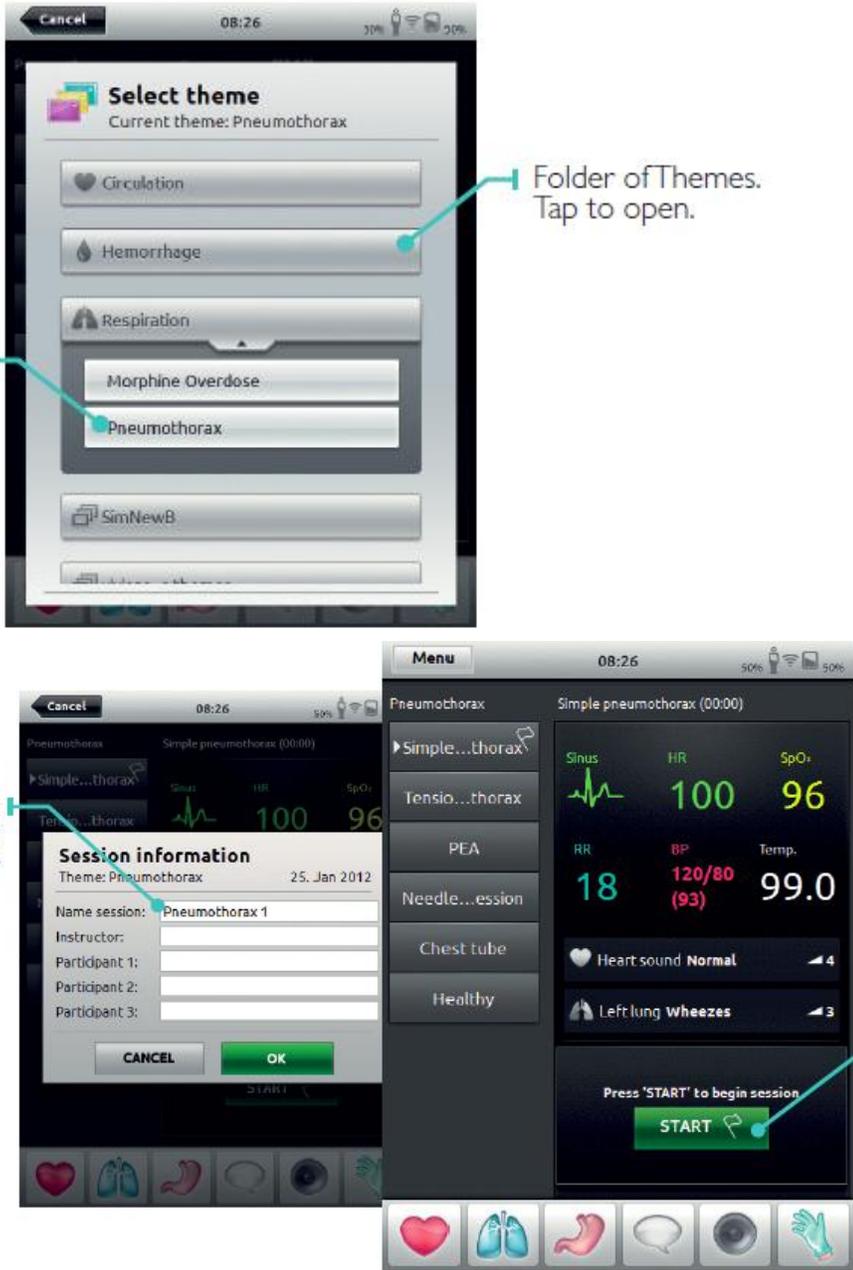


A: Yes

2.2 Manual Mode

Q: How do you run a scenario in Manual Mode?

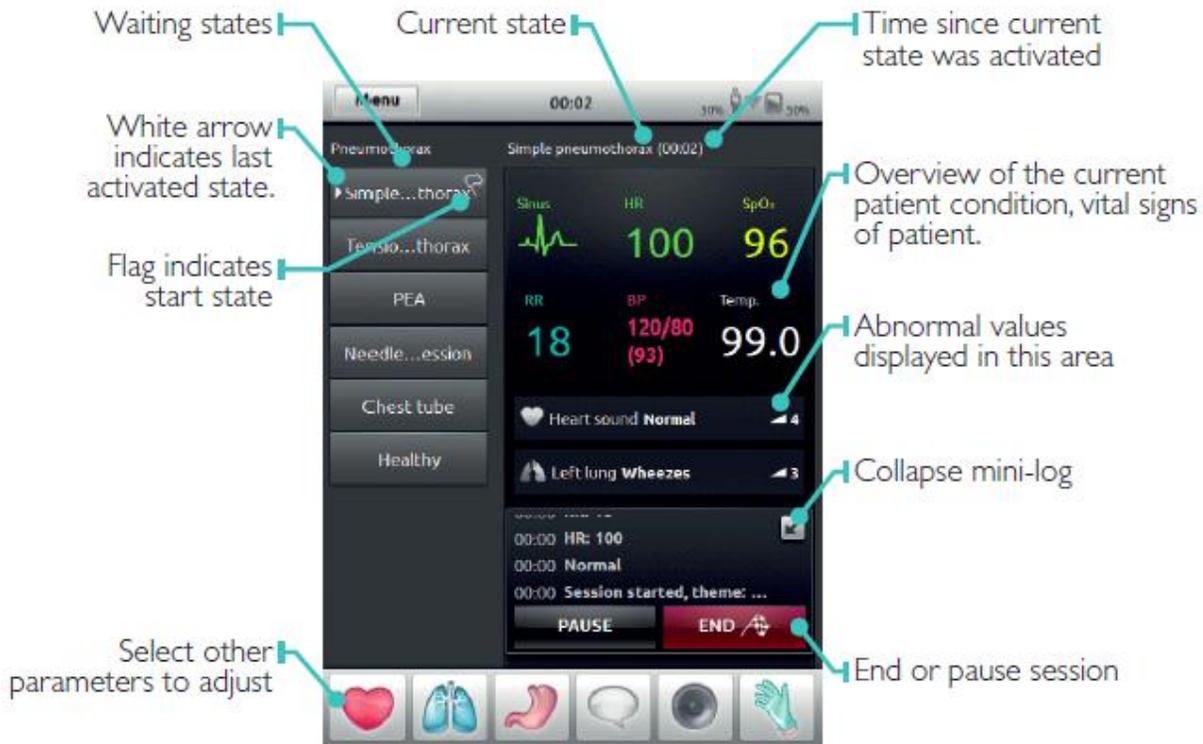
A: When running a scenario in Manual Mode, the instructor's task is to control the clinical state of the patient simulator, as well as logging the participant's actions. The instructor can plan scenarios using predefined themes that include various patient states.



The first screenshot shows the 'Select theme' screen. It lists several theme folders: Circulation, Hemorrhage, Respiration, Morphine Overdose, and Pneumothorax. A callout points to the 'Pneumothorax' folder with the text: 'Select Theme for simulation.' Another callout points to the 'Circulation' folder with the text: 'Folder of Themes. Tap to open.'

The second screenshot shows the 'Session information' dialog box. It contains fields for 'Name session:' (filled with 'Pneumothorax 1'), 'Instructor:', 'Participant 1:', 'Participant 2:', and 'Participant 3:'. A callout points to the 'Name session:' field with the text: 'Information about session entered here will be added to log.'

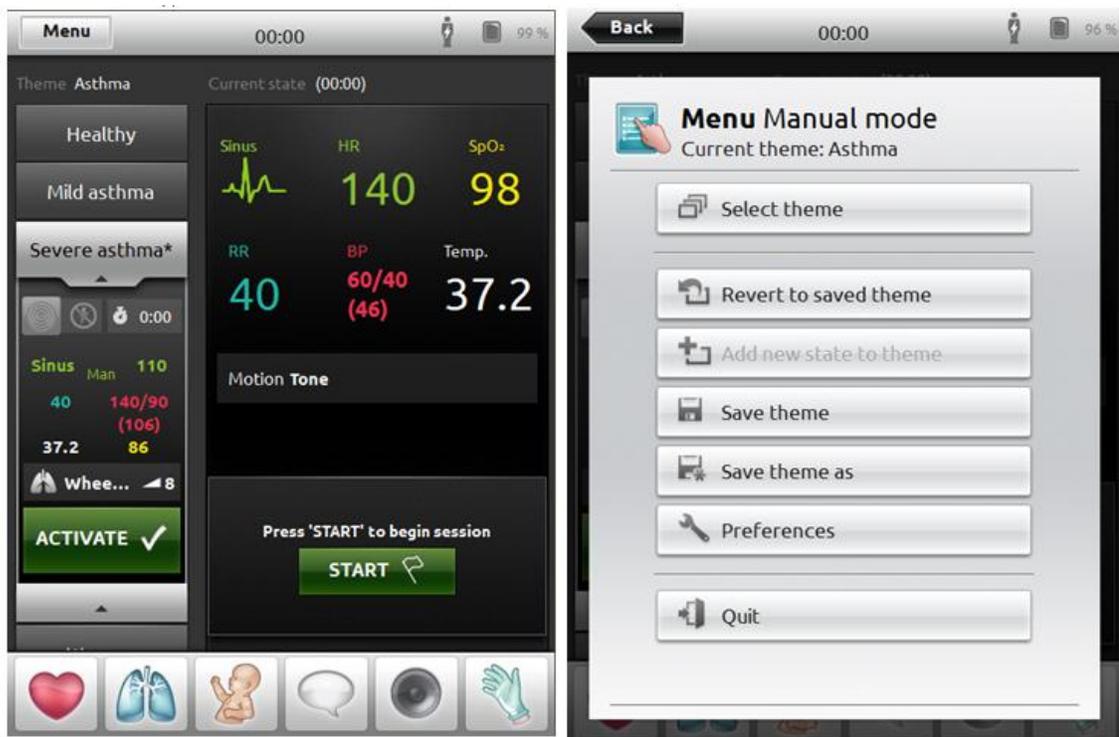
The third screenshot shows the main simulation menu for 'Pneumothorax'. It displays vital signs: Sinus HR 100, SpO₂ 96, RR 18, BP 120/80 (93), and Temp. 99.0. It also shows 'Heart sound Normal' and 'Left lung Wheezes'. A 'START' button is at the bottom. A callout points to the 'START' button with the text: 'Tap START when ready.'





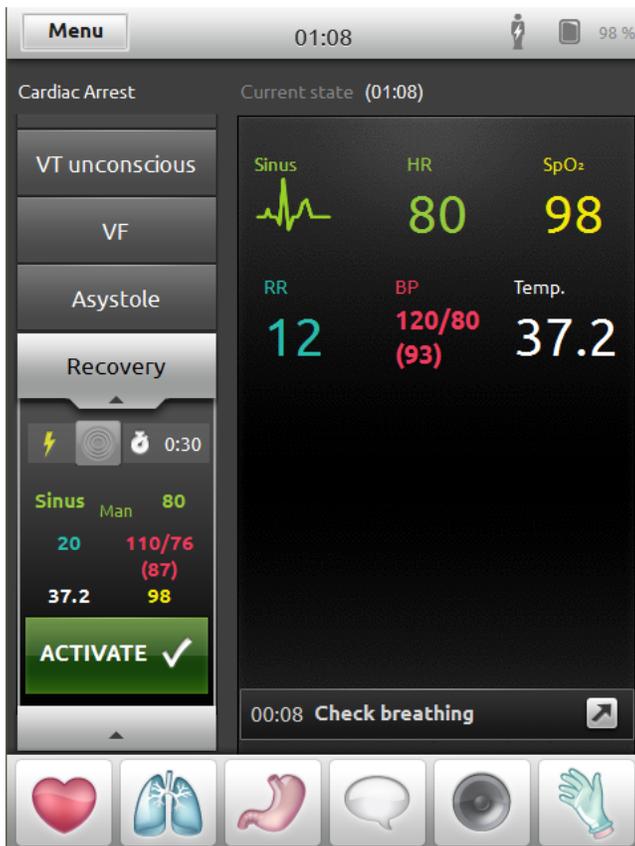
Q: Can I save the changes I have made to a theme?

A: Yes, you can. If you do any changes to the open/waiting state, the state name will get an asterisk next to it (*). From the menu you may want to save the theme with the current name or the save the theme with a new name ("Save theme as").



Q: What are the buttons inside the states for?

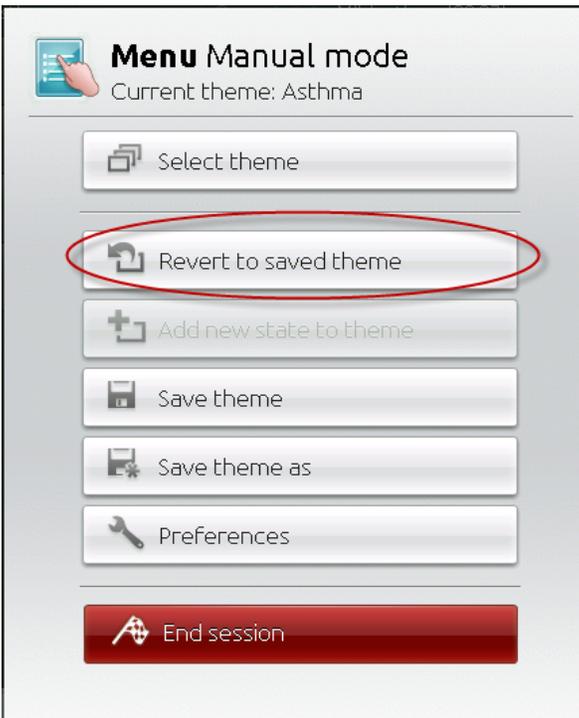
A: These buttons are attributes to the waiting state. Look to the buttons inside the open waiting state 'Recovery':



1. The one to the left is shock activation: If the slider is set active (the yellow lightning is visible) and the state is open, it will be activated if a shock is detected by the simulator.
2. The control to the right is transition time. Set your transition time to e.g. 0:30 and all the parameters in state will change gradually from the current state to the active one over 30 seconds. If the transition time is set to 0:00, the changes will happen immediately.

Q: Can you delete a state in manual mode?

A: Yes, hold down the state until it begins to “wobble” and an “X” appears in the corner. Press the “X” and the state will be deleted. To return to the original theme, select Menu > Revert to saved theme.





2.3 Registering Interventions

Q: How do you register interventions?

The screenshot displays the SimPad interface with the following elements and annotations:

- Categories of associated interventions:** Points to the top navigation bar with buttons for Sinus, Airway, Breathing, and Circulation.
- Interventions of the open category:** Points to the 'Initial' category button.
- Interventions always displayed:** Points to the 'Initial' category header.
- Counts interventions logged:** Points to the numerical counts next to each intervention item.
- Access to vital signs adjustments:** Points to the vital signs display at the top (Sinus 100, 120/80 (93), 18, 99.0, 96).
- Add comment:** Points to the keyboard icon in the bottom right of the log.
- Undo last registration:** Points to the 'X' icon in the log entry.

Category	Intervention	Count
Initial	Talk to patient	0
	Tap and shout	1
	Call for help	0
CRM Skills	Effective communication	0
	Team leadership	0
	Resource utilization	0
	Problem-solving	0
	Closed-loop communication	0

Log entries:

- 00:00 Normal
- 00:00 Session started, theme: Pneumoth...
- 00:04 Tap and shout

2.4 Changing Parameters & Display



Q: How can you adjust parameters manually?

ADJUSTING PARAMETERS MANUALLY

Tap the large coloured values in the main view, (e.g. respiration rate) to adjust the value.

Hold finger over slider to access the fine-adjustment magnifying bubble.

Move finger into the bubble and adjust the parameter in small increments.

Create a new state with the adjusted parameter.

Activate the new value.

CREATE New State ACTIVATE ✓

Select a parameter from the menu.

Tap to set desired condition.

UPDATE New State ACTIVATE ✓

Update the currently open waiting state.



Q: Can you create a waiting rhythm/state?

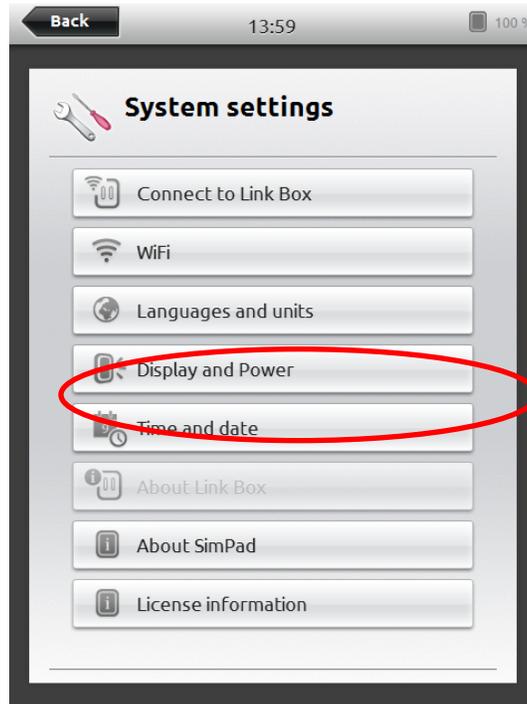
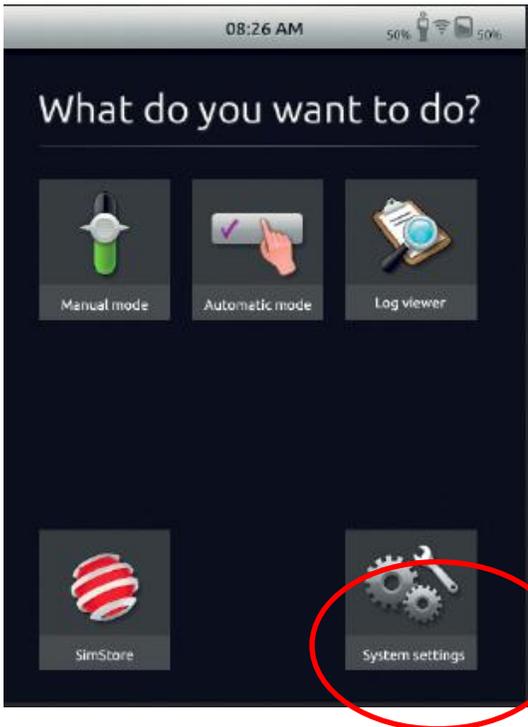
1) In manual mode, you can create a new state and activate it when ready.



2) In automatic mode (using SimDesigner), you can create Trends and Handlers to set clinical parameter changes or to set rules between events and automatic responses.

Q: How can I adjust the display?

A:



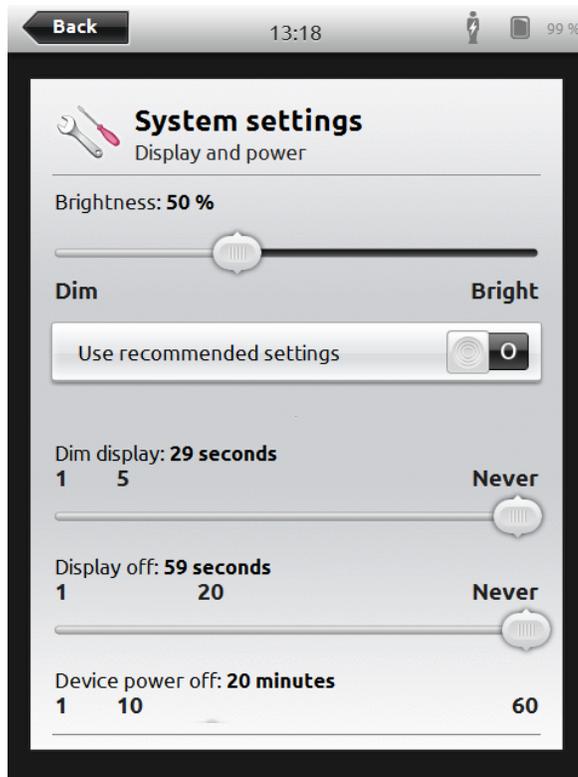
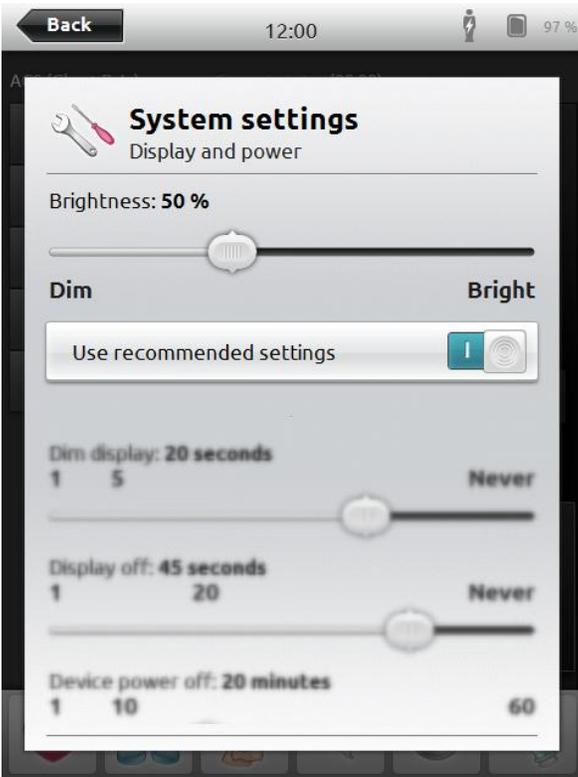
Q: The SimPad display is fading out too quickly. Can I change that?

A: You may want to override the default dimming of the display from System settings > Display and power.

Turn off the 'Use recommended settings' and slide the 'Dim display' time to the desired time when you want the display to be faded slightly.

You may want to change the 'Display off' time as well - from the slider below.

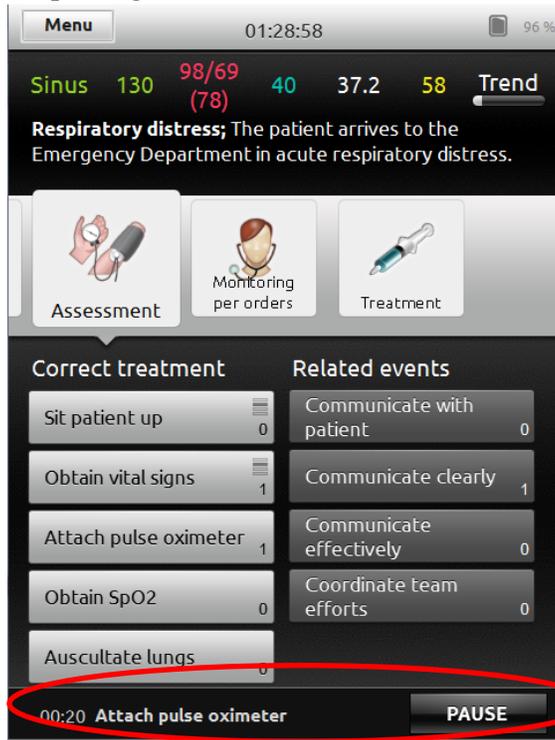
Please note that when changing these parameters you may experience that the SimPad runs out of battery faster.



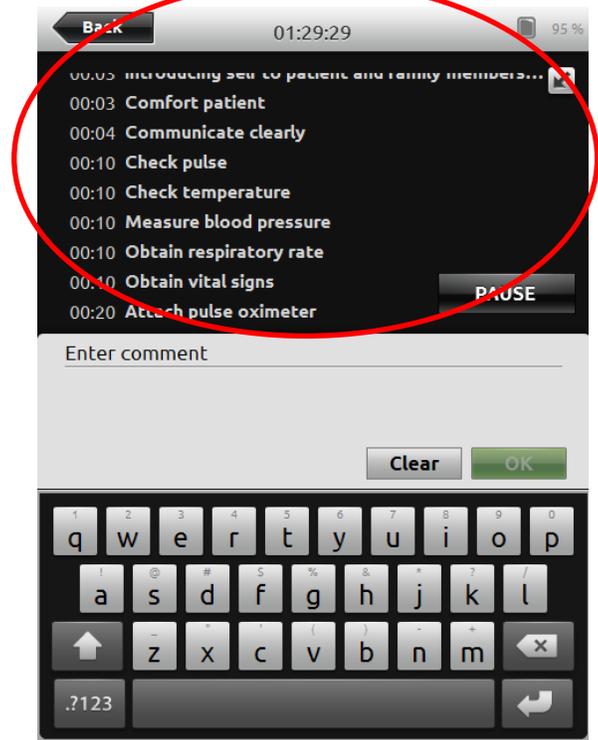
2.5 Event Log

Q: Can the event log be viewed prior to the end of the scenario (before clicking on End or Quit)?

A: Yes, the time stamped log can be viewed on the main screen of the GUI:



Automatic Mode:

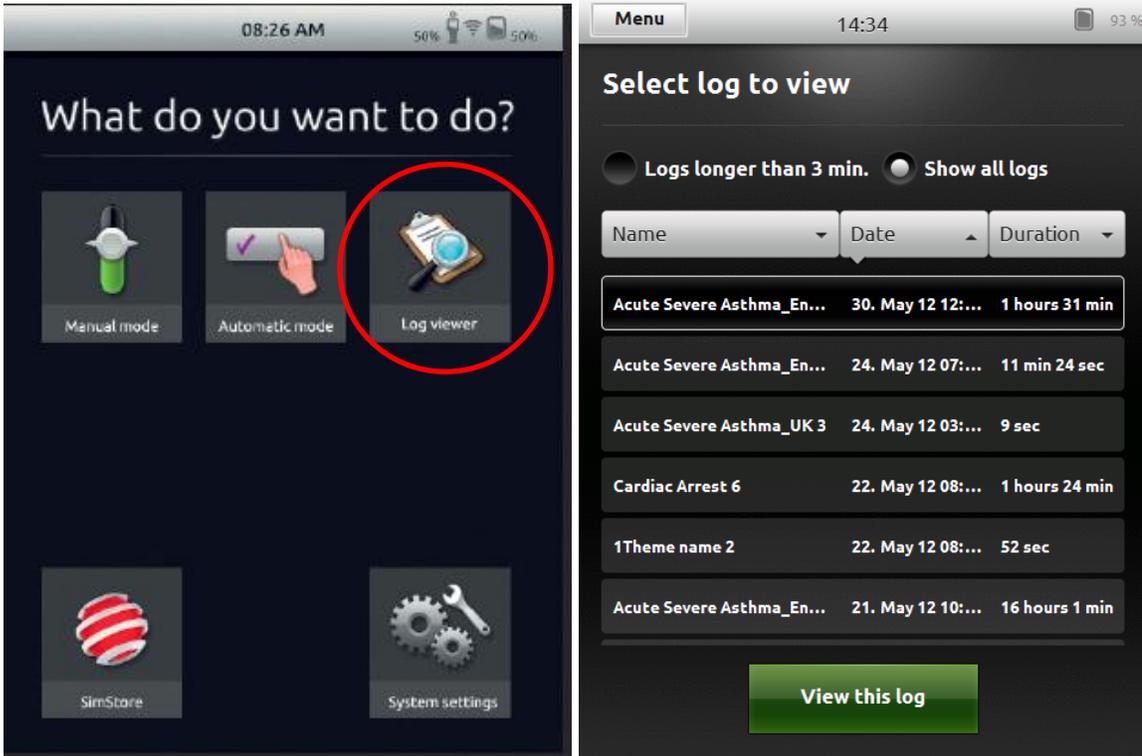


Manual Mode:



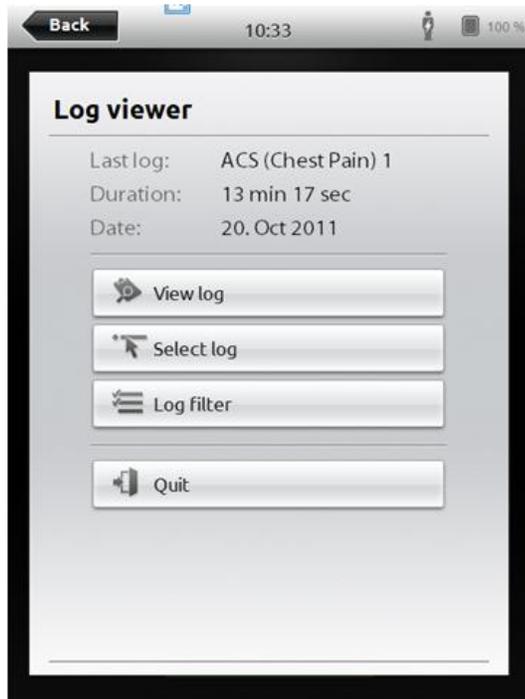
Q: Where can I find logs?

A: All logs are automatically saved and found by opening the Log Viewer program:



Q: How can I select a different log to debrief?

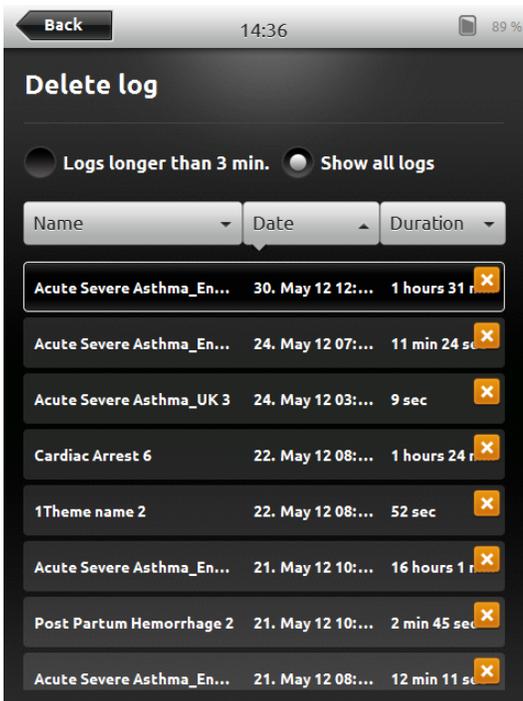
A: When viewing a log, go to the Menu (top left), where you can select another log to debrief.



Viewing the list of logs, you can sort the logs in different manners by clicking the column headers. This is also the view you will get to when entering the Log Viewer from the welcome screen.

Q: How do you delete a log from the SimPad?

A: When viewing the list of logs, press and hold on a log for 1 second. You can then delete a log by simply clicking the “X”:



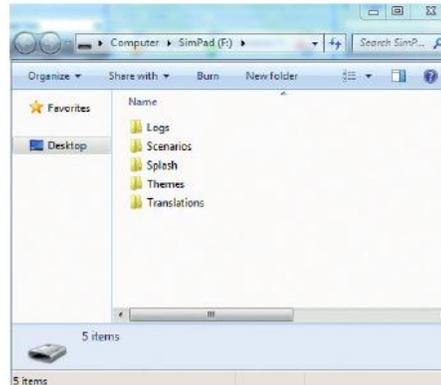
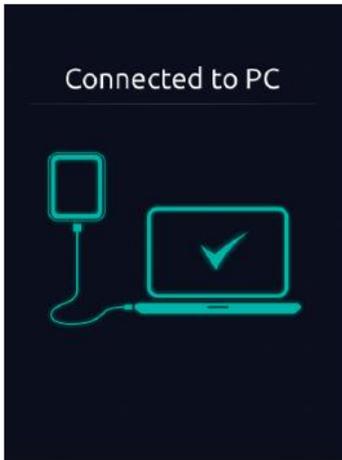
Q: Can the log be downloaded from the SimPad to a PC and viewed on the Debrief Viewer?

A: At this time, the logs can only be viewed on the SimPad device. Once the SimViewer application is available in Q4 2012, logs can be viewed/saved/printed on the PC.

2.6 Transferring files

Q: How do you transfer files to/from a PC?

A: Connect SimPad to the PC using the included USB cable.

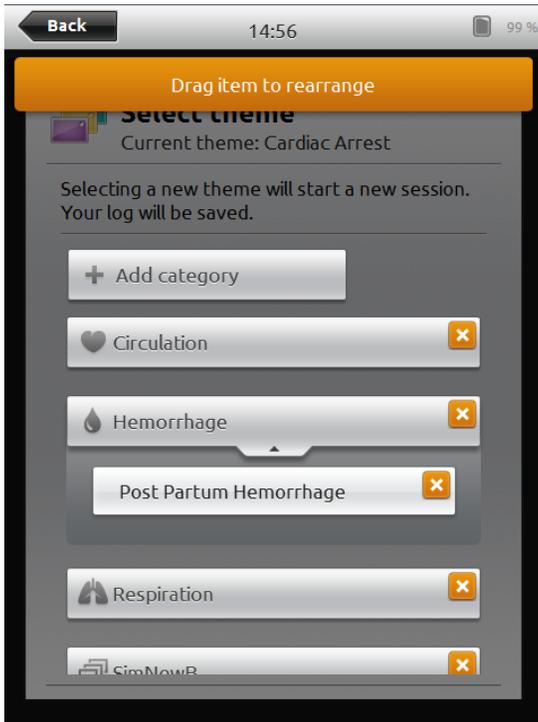


- Save new Scenarios in the Scenarios folder.
- Save new Themes in the Themes folder.
- Upload logs from the Logs folder.

Disconnect the USB cable from the SimPad when transfers are finished.

2.7 Deleting, adding and rearranging themes and pre-designed scenarios

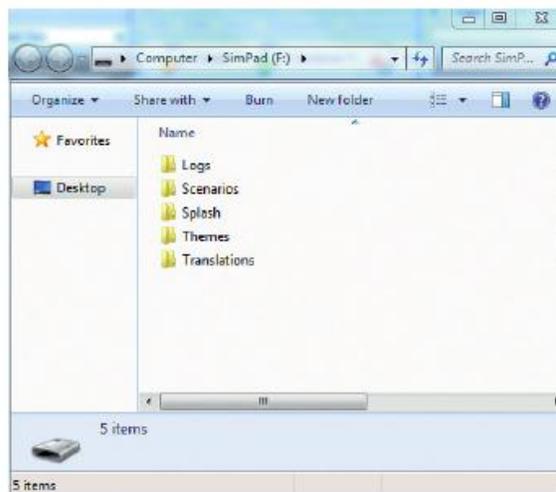
Q: For Manual Mode, how do I create a new group of themes?



A: Press and hold any of your themes for 1 second. You will then have the option of removing themes, adding a new category of themes (top of the screen). By press-and-hold a theme, you can easily drag-and-drop it into another theme category.

Q: How do I rearrange, delete or add scenarios for Automatic Mode?

A: Connect the SimPad to the PC using the USB cable. The SimPad device will then show up as any standard mass storing device:



Locate the “scenarios” folder. In that folder you can add a new scenario folder, delete scenarios or add scenarios. The changes will be real-time applied to the SimPad.

3 SimPad System

Q: What does the SimPad system include?

A: The SimPad System includes:

- SimPad : Operator’s remote control
- Link Box: Connects to and controls the patient simulator
- Lithium–ion battery: Battery power for Link Box
- AC Adapter: Power and charger for SimPad and Link Box
- Manikin adapter cable: Connects Link Box to patient simulators
- Manikin Strap: Attaches Link Box and battery to patient simulator
- USB Cable: Attaches SimPad to PC for updates and downloads
- SimPad Wrist Strap
- SimPad Sleeve: Protective case for SimPad
- Ethernet cable



SimPad



Link Box



Li-Ion Battery



AC adapter x 2



Manikin Adapter Cable



Manikin Strap



Wrist Strap



USB Cable



SimPad Sleeve

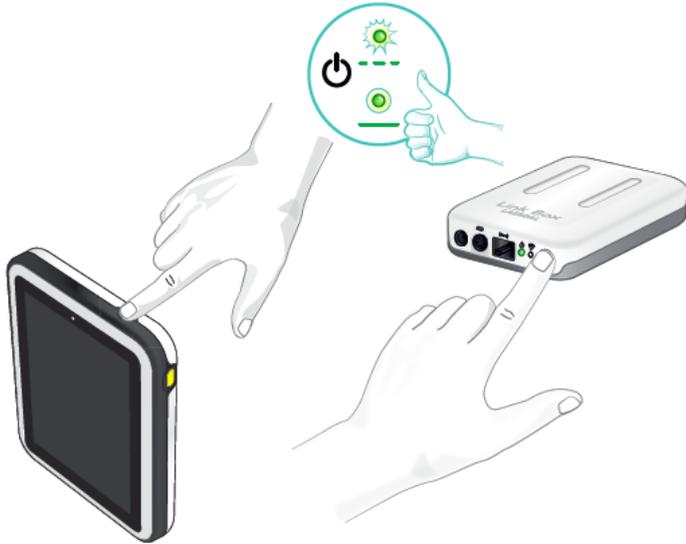


Ethernet cable

Q: How do I turn on the SimPad System?



A:



3. TURN ON LINK BOX AND SIMPAD

- Turn on both units by pressing the ON button marked  for at least half a second.
- Release the button when the LED starts blinking green. First start up may take a few minutes.
- When the Link Box is ready, the ON light will turn steady green.
- Follow the instructions on the display to select language and other preferences.

Q: Can I purchase 1 SimPad system and move it around from simulator to simulator?

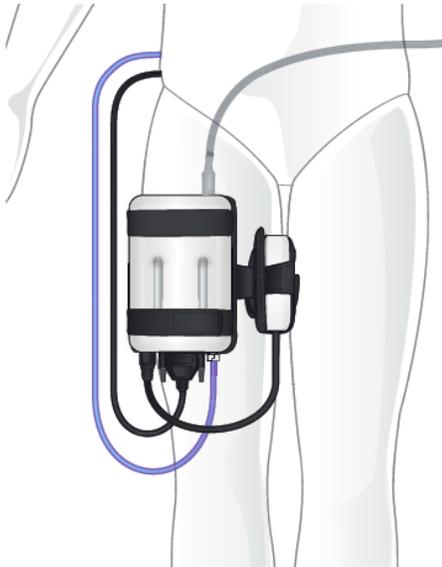
A: Yes, absolutely, the SimPad system can be moved from simulator to simulator.

There is a one to one relationship between the SimPad System and simulator; you cannot run multiple simulators with one SimPad System at the same time.

3.1 Link Box

Q: How do I connect the Link Box to the manikin?

A:



2. CONNECT LINK BOX TO THE MANIKIN

- Connect the manikin cable to the Link Box.
- If it is an older version manikin, use cable adapter included in the package.
- Connect the BP tube (if applicable for this manikin) to the BP tube input on the Link Box.
- Connect the Li-Ion battery to the Link Box. It is possible to connect two batteries.
- If desirable, connect the DC adapter to the Link Box.
- Use the included manikin strap to attach the Link Box and battery to the manikin.

Q: Can you connect SimPad to another Link Box?

A: SimPad can only be connected to one Link Box at a time. A Link Box can only be connected to one SimPad at a time. SimPad will remember the Link Box it was last connected to, and try to re-establish this connection the next time it is turned on. To connect SimPad to a different Link Box, touch the connection information field in the upper right corner.



Q: The light on the Link Box is blue. What does that mean?



A: The Wi-Fi LED on the Link Box will be blue when the Link Box is connected to a SimPad.

Q: The light on the Link Box is blinking yellow. What does that mean?

A: The ON-light on the Link Box will be blinking yellow when the Link Box is turned off and one or more battery is being charged through the Link Box. When the batteries are fully charged, the light will be steady green.

Q: The light on the Link Box is blinking green. What does that mean?

A: The On-light on the Link Box will be blinking green when the Link Box is starting up or shutting down. It will also be blinking green when a software update of the Link Box or an attached manikin is ongoing.

Q: The light on the Link Box is red. What does that mean?

A: A red light means that there has been an error.

If it happened during software update, press the ON-button and the unit will try to return to normal. A log file with detailed information about the failure is placed in the USB stick with the software update.

If it happened when the unit was turning on, hold the On-button in for 5 seconds until the light goes away, and try to turn the unit on again. If it still comes up with a red light, contact Laerdal Customer Service.

Q: How do I re-install/update the SimPad software?

A: To perform a software update, you connect the SimPad via USB stick or wired connection to PC.

3.2 *SimPad*

Q: How can you operate SimPad?

A: The software can be operated in 2 modes:

Automatic Mode When running a scenario in Automatic Mode, the only task required by the instructor is to log the participant's actions. These events, when logged, as well as the events detected by the patient simulator, will drive the scenario forward. All events are registered in the log for post-event debriefing and analysis.

Manual Mode When running a scenario in Manual Mode, the instructor's task is to control the clinical state of the patient simulator, as well as logging the participant's actions. The instructor can plan scenarios using predefined themes that include various patient states.

Q: What is the yellow button on the side for?

A: This is the auxiliary button. By default it does the same as 'Activate' on the screen or works as a "Press to talk" when a headset is connected to the SimPad. It may be set to have other behavior. Go to Menu > Preferences > Auxiliary button setup in your application to set your desired functionality.



3.3 Battery

Q: How do I charge the battery?

A:

I. CHARGE THE BATTERY



- Connect SimPad to one of the AC adapters and plug into a wall outlet. The battery is fully charged when the LED on SimPad shows a steady yellow light.



- Connect the Li-Ion battery to one of the DC adapters and plug into a wall outlet. The battery is fully charged when the LED on the battery shows a steady green light.

LAERDAL LI-ION BATTERY



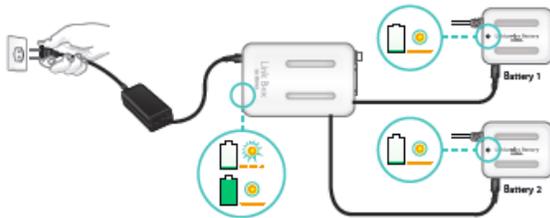
It is possible to connect two Laerdal Li-Ion batteries to the Link Box.

When the Link Box is powered on, the batteries are discharged in parallel. The remaining capacity in each battery will be displayed in the SimPad.

BATTERY CHARGING

The batteries can be charged through the Link Box when the Link Box power is turned off and the Link Box is connected to the AC adapter.

During charging, the Link Box ON indicator will blink with a yellow light, and the LED indicators on the batteries will show a steady yellow. When the batteries are fully charged, voltage to the batteries will be turned off and the indicator on the Link Box will show steady yellow.



Alternatively, a battery can be charged by connecting it directly to the AC adapter.



During charging, the LED indicator on the battery will show a steady yellow. When the battery is fully charged, the LED indicator shows steady green.



Q: How can I tell the remaining battery life?

Remaining battery for Link Box.
100% is around 4 hours.
With 2 batteries the sum could be up to 200%.

Remaining battery for SimPad device.
100% is around 4 hours.

Details for the two Link Box batteries.

Q: What is the battery life when fully charged?

A: Approximately 4 hours.

Q: Can I use my SimPad while it's charging?

A: Yes.

Q: Can you charge the SimPad via a USB connection to a PC?



Note: If SimPad is turned off, the battery can be charged from the USB connection.

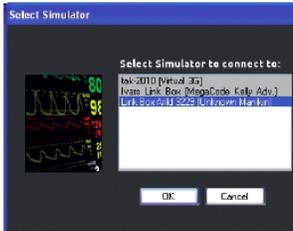
A: Yes: *This charging is slower than if it is connected to the included DC adapter.*

3.4 Patient Monitor (Hardware, Software, and License Keys)

Q: How do I connect the simulated patient monitor?



6. CONNECTING A SIMULATED PATIENT MONITOR



- Ensure the monitor PC and the SimPad System are connected to the same network. See “Connections” chapter for details on network connections.
- Select the appropriate Link Box from the manikin connection menu.
- To minimize WiFi traffic, it is recommended to connect the patient monitor to the Link Box using a direct network cable connection.

A:

Q: Is the patient monitor software license protected?

A: Yes, in addition to the existing SimPad Patient Monitor hardware configured options, the SimPad Patient Monitor is also available as a software program. This serves the need to use existing PCs as patient monitor(s), and not order our patient monitor software pre-installed on a PC.

This SimPad Patient Monitor software program is compatible with a PC running Windows 7 or Windows XP.

The software is available as a download from www.laerdal.com/simpad.

The following license options are available for ordering:

- 200-11950 SimPad PM SW (1 license key included)
- 200-11850 SimPad PM SW (5 license keys included)
- 200-11750 SimPad PM SW (10 license keys included)

Q: Why would I need an additional patient monitor license key?

A: If you plan to load the PM software onto more than one PC, you will require an additional license key.

Q: How do I obtain the license key for Patient Monitor software?

A: Customer Service and Tech Support will provide the license key.

Q: Can the patient monitor software be used with TV monitors (i.e. TV's mounted to the wall in Simulation Centers)?

A: A TV can be used to display the patient monitor by connecting a standard connection cable from the PC to the TV.

Q: Can I load Microsoft Office and Acrobat into the 12” monitor, so that the students can do EMRs on the Patient Monitor screen (since the 12” monitor includes a keyboard) during the simulation?

A: It is recommended that the Monitor PC is only used for that purpose and that other software is not loaded on it. Other software might interfere with the function of the Laerdal monitor software.



Q: Can I use their SimMan/SimBaby/SimNewB/SimJunior/ALS Advanced wired ELO monitor with the SimPad System?

A: When operating via the SimPad remote you cannot use the SimMan/SimBaby wired ELO monitor. When operating via the PC and LinkBox, the wired ELO monitor can be used.

Q: Can I use their SimMan 3G patient monitor as the SimPad patient monitor, if they purchase the SimPad patient monitor software separately?

A: Yes, The Patient Monitor will run on Windows XP or Windows 7 operated PC. So, a SimMan 3G patient monitor can be used as the SimPad patient monitor. However, it is not recommended to use the PC for both as a SimMan 3G patient monitor and as a SimPad patient monitor - as the programs run on different set ups on the machine. Though, it will work to run the SimPad System always with an Ethernet cable connection, and the SimMan 3G patient monitor always via a wireless connection.

The SimPad Patient Monitor is recommended to be used while wired (Ethernet cable) to the Link Box.

However, it does also work on a wireless network, by connecting the SimPad System and the patient monitor pc to the same network.

Q: What technical recommendations do we provide for the PC where SimPad Patient Monitor Software can be downloaded?

A: The software is compatible with Windows 7 and Windows XP. A touchscreen laptop is recommended, as it is more realistic to real patient monitor operation, but not required.

Q: Can x-rays, media and labs be loaded into a SimPad Scenario for use with the SimPad portable patient monitor?

A: No, not with the initial release.

4 Operating System, Network, and Connectivity

Q: What operating system will SimPad run on?

A: The SimPad is operating on the Linux system.

**Q: How can SimPad operated utilizing Wi-Fi or WLAN:
Wi-Fi**

- Wi-Fi is the primary communication method between the SimPad and the Link Box. The units in a package are able to connect to each other, point to point, without any setup, regardless of other Wi-Fi infrastructure that is present.
- If multiple Link Boxes are present, it is possible to select on the SimPad which Link Box to connect to.
- It is possible to set up the units to communicate with each other through an existing wireless Wi-Fi network.
- It is possible to disable Wi-Fi transmitters/receivers in both units.
- It is possible for a PC to connect to the Link Box via a wireless network, and take the role of the SimPad, (Advanced mode of ALS Simulator, SimJunior and SimNewB).
- Wi-Fi (802.11)



WLAN

- The wired LAN connector can be used if it is not desirable to use the Wi-Fi connection.
- It is possible to connect the SimPad and Link Box using a standard (not crossed) LAN cable. The units shall then communicate through the LAN cable.
- When a LAN cable is connected, the units shall turn the Wi-Fi off.
- It is possible to set up the units to communicate with each other through an existing wired LAN.
- It is possible for a PC to connect to the Link Box, point to point or through a wired LAN, and take the role of the SimPad. (Advanced mode of ALS Simulator and SimNewB).

Q: Why type of connection is needed between the SimPad and the LinkBox?

A: The SimPad and Link Box communicate over a Wi-Fi ad-hoc network out of the box. The ad hoc network uses Wi-Fi channel 1, which is our recommendation providing the units are not spread over a wide area. If the units are spread out over a large area (more than 100x100 ft. and depending on the type of walls), use an infrastructure Wi-Fi with several access points.

From the SimPad directions for use document:

5. CONNECTION BETWEEN SIMPAD AND LINK BOX

SimPad communicates with the Link Box using WiFi. When the units are turned on for the first time they will set up an ad hoc network called SimLink. If no other Link Boxes are visible on the default SimLink network, the SimPad will pair with the Link Box, remember the pairing, and reconnect when units are turned on again.



- Connection to SimPad is indicated on the Link Box with a blue light in the WiFi LED.



- Connection to the Link Box is indicated in the upper right corner of SimPad's screen with a Manikin symbol.

Q: What communication method is needed between the SimPad and the Patient Monitor?

A: The preferred method for the patient monitor is wired (Ethernet) directly between the monitor PC and Link Box or over a wired network. We do not recommend that the monitor be used on an ad-hoc network.

Q: Can you connect SimPad to a network?

A: Yes. For instructions, please see the “Connecting the SimPad System” document or the SimPad Directions for Use (available on www.laerdal.com/simpad in the download section.).

Q: Is there a way to run this wired and not use the wireless solution?

A: Yes, a standard Ethernet cable can be used to connect the SimPad to the Link Box.

Q: What is SimLink?



A: The SimPad communicates with the Link Box using Wi-Fi. When the units are turned on for the first time they will set up an ad hoc network called SimLink.

Q: If there are multiple SimPads being used simultaneously in a training lab, is there a way to set their frequency channels so that they don't interfere with each other?

A: The SimPad is not like VitalSim, which used different channels. The SimPad uses Wi-Fi, which time-shares a few channels. The default SimLink network is on Wi-Fi channel 1. Otherwise you may set up infrastructure networks spread over several Wi-Fi channels to avoid interference from other systems.

Q: My SimPad cannot connect to the Link Box. What should I do?

A: If your SimPad cannot find a Link Box, make sure you go back to the default network (SimLink). It might be that your SimPad System is connected to a Wi-Fi network that is no longer available. Connect the SimPad and Link Box with an Ethernet cable, and ensure that SimPad System is running on the SimLink network, the Laerdal Net, or your local Wi-Fi network. Please also see the “Connecting SimPad” instructions available as a download via the SimPad product page on Laerdal.com.

Q: My SimPad could not identify the manikin it was attached to – “unknown manikin” error message.

A: Ensure that the manikin cable is fully connected (tightened) to Link Box. Make sure that the cable between manikin and Link Box is entered into the Link box the right way.

Try to turn the Link Box off and back on while the manikin is connected.

Q: If multiple units are in the same room, how do I know which SSID to display?

A: The SSID is the network identification. SimPad and Link Box by default sets up their own SimLink network, but you may change this to an infrastructure network.

The available Link Boxes that are on the same network as your SimPad are listed in the “Connect to Link Box” screen. If the Link Box has not been given a name, it will show as “Link Box-xxxxxx” where xxxxxx are the last six digits in the Link Box serial number, found on the bottom of the Link Box. The connected manikin type will also be displayed.

Link Boxes and SimPads can be given names in the Setup menu, and included in the SimPad package are name labels that can be placed on the units.

Q: Can you connect the Link Box to the computer to configure it?

A: No you cannot.



Q: Is the IP assignment DHCP or static?

A: The SimLink network units will have static IP-addresses in the range 172.26.0.0/16 using serial numbers in the last digits. For connection to infrastructure networks Wi-Fi or wired DHCP is required. For a direct wire connection a link local address is assigned.

Q: Can you connect to a closed network (requiring a password) or can SimPad only connect to an open network?

A: SimPad and link Box can connect to WPA and WPA2 wireless networks requiring passwords.

Q: How many SimPad Systems can be operated simultaneously?

A: Depends on whether you are using sound or not and other Wi-Fi traffic. With continuous sound transfer between SimPad and Link Box the limit is 5 systems on the same network. Without sound you can triple that number. The number is of course dependent on dependent on other traffic on the network and also the distance between the units, if there are walls between units in the network and the type of walls.

Q: What is the max distance the SimPad can be from the Link Box during operation?

A: 30 m (100 ft.) in free air. If there are walls between the units, the distance may go down dramatically. The distance is also dependent on how other units are placed in the same network. All units in one network should be within a diameter of 30 meters (100 ft.).

5 Features

5.1 Sounds

Q: Can you talk through the manikin without a headset?

A: Yes, the Link Box has a microphone input where you can plug in a standard computer microphone or another sound device source. When only this microphone is plugged in the input from the microphone will be routed to the manikin.

Q: Can you use a headset with SimPad?

A: A headset can connect to SimPad to create two-way communication between the operator and the simulator and surroundings.

Plug an analogue headset (4 pin jack) into the SimPad. The microphone of the headset will now be routed to the manikin. If a microphone is connected to the Link Box as in alternative one, this microphone will now be routed to the headset.

The yellow button on the SimPad can be configured in the Preferences menu to enable and disable the input from the headset.



The headset output on the Link Box duplicates the sound to the manikin. It can be used to improve the sound by adding additional speakers around the manikin.

Q: What heart sounds are available?

Heart sounds are synchronized to ECG.

HEARTSOUNDS:	ADULT MANIKIN	CHILD MANIKIN	INFANT MANIKIN
Normal	•	•	•
Aortic Stenosis	•	•	•
Austin Flint Murmur	•	•	•
Mitral Valve Prolapse		•	
Systolic Murmur	•	•	•
Diastolic Murmur	•		
Friction Rub	•		
Opening Snap @70 msec	•		
Stills Murmur		•	•
Atrial Septal Defect (ASD)		•	•
VentricularSeptal Defect (VSD)		•	•
Pulmonary Stenosis			•

A:

Q: What lung sounds are available?



Lung sounds are synchronized to breathing rates, adjustable from 0 – 60 breaths / min.

LUNG SOUNDS:	ADULT MANIKIN	CHILD MANIKIN	INFANT MANIKIN
Normal Breath Sounds	•	•	•
Fine Crackles	•	•	•
Coarse Crackles	•	•	•
Pneumonia	•	•	•
Wheeze	•	•	•
Stridor	•	•	•
Pleural Rub	•		
Rhonchi	•	•	•

A:

Q: What bowel sounds are available?

BOWEL SOUNDS:	ADULT MALE	ADULT FEMALE	CHILD MANIKIN	INFANT MANIKIN
Normal	•	•	•	•
Borborygmus	•	•	•	•
Hyperactive	•	•	•	•
Hypoactive	•	•	•	•
Fetal Normal 140 BPM		•		
Fetal Brady 100 BPM		•		
Fetal Tachy 200 BPM		•		
No sound	•	•	•	•

A:

Q: What vocal sounds are available?



Vocal sounds are adjusted for age and gender of manikin.

MALE MANIKIN	FEMALE MANIKIN	CHILD MANIKIN	INFANT MANIKIN
Vomit	Vomit	Vomit	Cry
Cough	Cough	Cough	Cough
Moan	Moan	Moan	Content
SOB Breathing	SOB Breathing	SOB Breathing	Hiccups
Scream	Scream	Scream	Scream
Yes	Yes	Yes	
No	No	No	

User defined vocal sounds can replace the included vocal sounds.

A: Sound format for user defined sound files must be raw format 16KHz, 16 bits signed, little endian.

Q: Can you change the duration of the vocal sounds?

A: Yes, tap the sound once to turn it on and it will play the entire sound file. If you tap it again, it will stop.

Q: The vocal sounds not playing from the manikin.

A: Possible issues:

- Ensure that the manikin cable is fully connected (tightened) to LinkBox.

5.2 Rhythms

Q: What ECG rhythms are available on the SimPad System?

A: The following rhythms are available in the SimPad System:



BASIC RHYTHMS	RATES ADULT AND CHILD	RATES INFANT	EXTRA- SYSTOLES
Sinus	20 - 200	20- 240	PVC PVC RonT Couplet PVC PAC/PJC
WPW	20 - 200	20- 240	
Hyperkalemia	20 – 200	20- 240	
Long QT	20 - 200	20- 240	
Ischemia	20 - 200	20- 240	
Inferior AMI, ST elevation	20- 200	20- 240	
LBBB	20- 200	20- 240	
RBBB	20- 200	20- 240	
Atrial Tachycardia	140 – 260	90 - 320	
SVT	140 – 260	90 - 320	
Atrial Flutter	75, 100, 150	75, 100, 150	
Atrial Fibrillation	50 - 240	50 - 240	
Junctional	40 - 220	40 - 220	
1° AV-Block	20 – 135	20 – 135	PVC PVC RonT Couplet PVC PAC/PJC
2° AV Block type #1	3:2,4:3, 5:4	3:2,4:3, 5:4	PVC PVC RonT Couplet PVC
2° AV Block type #2	4:3, 3:2, 2:1	4:3, 3:2, 2:1	
3° AV Block	10 - 50	20 - 100	
Ventricular Tachycardia (VT)	120 - 240	120 - 320	
Torsade de pointes	180	180	
Idioventricular	10 - 100	14 - 100	
V.Fib.	0.1 – 1 mV	0.1 – 1 mV	
Asystole			
Ventricular Standstill			
Ventricular Pacemaker	50 – 150	50 – 150	

5.3 Blood Pressure

Q: How do you calibrate the BP cuff?

A: See Preferences menu.

Q: What is the blood pressure range?



A:

BLOOD PRESSURE	
Pressure range	0 - 300 mmHg
Accuracy	+/- 4 mmHg

	ADULT MANIKIN	CHILD MANIKIN	INFANT MANIKIN
Default Blood Pressure (mmHg)	120/80	100/70	94/66

Q: Does the pulse automatically adjust to the blood pressure?

ADULT PULSES ARE AUTOMATICALLY ADJUSTED TO BP AS FOLLOWS:

SYSTOLIC BP	CAROTID PULSE	RADIAL/BRACHIAL PULSE
>= 88	Normal	Normal
< 88	Normal	Weak
< 80	Normal	Absent
< 70	Weak	Absent
< 60	Absent	Absent

Infant pulses are automatically set to absent when Systolic BP is below 10 mm Hg. Otherwise Infant pulses are normal.

6 SimDesigner

Q: What is SimDesigner?

A: The SimDesigner software program is a content developer tool for SimPad. SimDesigner is made for SimPad users that want to:

- Create pre-programmed scenarios to use on their SimPad(s), or to sell and distribute via SimStore
- Modify purchased SimStore scenarios (if not disallowed by the author)
- Convert existing scenarios to the SimPad scenario platform, which offers easier simulation operation and added functionalities, such as unlimited learner events, multiple event properties, grouping learner events, adding icons to event groups, and more.

7 Theme Editor

Q: What is the Theme Editor?

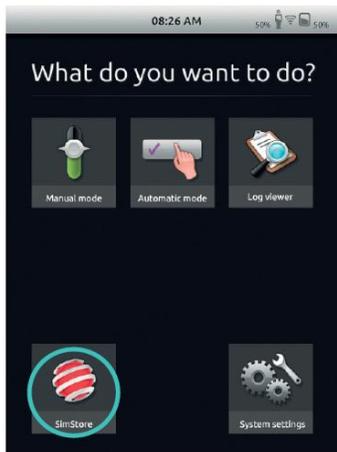
A: The SimPad Theme Editor program is an easy and intuitive content developer tool, which enables SimPad users to simply create and edit Themes for SimPad Manual Mode operation. The program is free of charge and is accessible via the SimPad product page on the Laerdal website.

8 SimCenter

8.1 SimStore

Q: How do I register my SimPad on SimStore?

A:
REGISTERING SIMPAD ON SIMSTORE
To register SimPad on SimStore, it needs to be connected to a network with internet, either via wired Ethernet or a WiFi network.



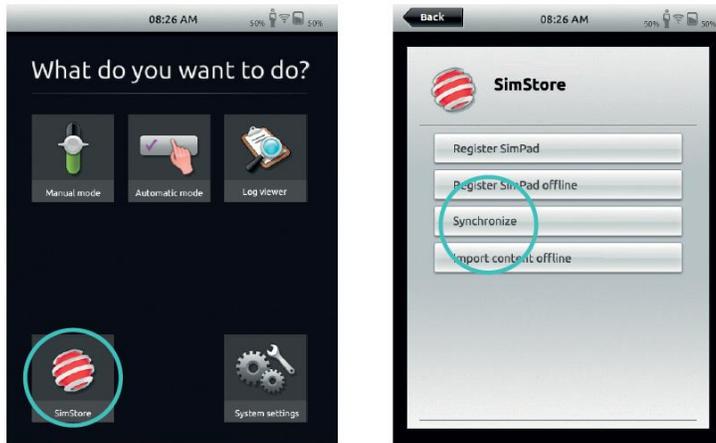
- Touch the SimStore Icon on the start screen.
- Select institution, enter username and password and touch register.
- SimPad identifier will then automatically be transferred to SimStore and the device is registered on the selected account.

Q: How do you synchronize SimPad with SimStore?

A:

SYNCHRONIZING SIMPAD WITH SIMSTORE

After SimPad has been registered on SimStore, the SimStore Icon on the start screen becomes a Synchronize selection. Synchronize will download scenarios assigned to this SimPad on SimStore. Administration of the SimPad and purchasing of scenarios on SimStore must be done from a PC.



Q: When will the current VitalSim scenarios be converted to SimPad and be available on SimStore?

A:

SimStore Description	# of Scenarios	Capital License	Annual License	Estimated Release Date
Simulation in Nursing Education Volume 1 (NLN)	20	\$3,540	\$1,416	Currently available on SimStore
ACLS Scenarios (AHA)	31	\$5,450	\$2,180	Q3 2012
Emergency Preparedness Scenarios (Gordon Center)	25	\$4,425	\$1,770	Q3 2012
Advanced Neonatal Resuscitation & Stabilization Scenarios (AAP & AHA)	20	\$3,540	\$1,416	Q3 2012
Neonatal Resuscitation Program Scenarios (AAP & AHA)	11	\$1,925	\$770	Q3 2012
Simulation in Nursing Education Volume 2 (NLN)	20	\$3,540	\$1,416	Q3 2012



Congenital Anomalies & Birth Trauma Scenarios (AAP & AHA)	10	\$1,925	\$770	Q3 2012
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Q: Are the scenarios available on SimStore editable?

A: All scenarios listed in the table above can be edited using SimDesigner. Other scenarios can be edited if allowed by the author.

Q: Can I purchase a “box” of scenarios rather than on SimStore?

A: No, scenarios will only be available on SimStore.

Q: How can scenarios be downloaded from SimStore to SimPad?

A: Synchronization can be accomplished through on-line sync or the offline method as is currently available on SimStore.

9 Scenarios

Q: Can I convert SimMan Classic scenarios to work on SimPad?

A: Yes, all scenarios from other simulators can be converted to the SimPad format (.scx files). However the scenarios many need to be manipulated to enable and utilize the new functionalities (event properties, grouping them, etc.).

Q: Are my VitalSim scenarios compatible with the SimPad system and will I have to make additional functionality changes?

A: VitalSim scenarios are not directly compatible with SimPad. However, you can convert a VitalSim scenario to a SimPad scenario by simply opening it in SimDesigner and saving it in the new scenario format. The scenarios may need to be manipulated to enable and utilize the new functionalities (event properties, grouping them, etc.).

Q: What scenarios are included with the SimPad System?

A: Acute Severe Asthma (English, French, German, Italian, Japanese, Spanish) and Angina Coronary Heart Disease (Chinese, Korean).

10 Services

Q: What Technical and Educational Services are available for the SimPad System?

A: The following:



Catalogue number	Course	Comment
200-10051	SimPad e-learning Package	Includes 8 licenses (licenses must be activated within the first year)
200-90151	Integrating SimPad. At Customer Site	The focus of this course is to provide an overview of the SimPad System and its functionality. Covers how SimPad integrates with simulation based education (details to follow by PIB) Includes Learner Manual.
200-30001PP	SimPad Protection Program	Two year duration. Includes up to three replacements of a broken SimPad unit (does not include Link Box). We anticipate situations where a SimPad user may accidentally damage their SimPad remote due to drops, immersion in water etc. These events are not warranty replacement situations. The protection package would provide a solution to customers to avoid downtime due to non-warranty failures.

Q: What is included in the E-Learning Package?

A: This interactive e-learning course includes tutorial videos, PDF's, and checklists to help introduce SimPad and enable users to utilize and integrate it into their programs. The course is separated into 2 sections:



Getting Started -

This section provides an overview of the SimPad[®] system starting with components, assembly, and start-up-procedures. The section also reviews topics such as how to register SimPad on SimStore[™], synchronize content with SimStore and connect to patient monitor.

Making Things Happen -

This section provides comprehensive tips for using SimPad in both Automatic and Manual modes. This section also contains information about vocal sounds, the patient monitor, and viewing the debriefing log.

Q: Where will the SimPad E-learning course be hosted?

A: on Laerdal.com. Create or sign into your Laerdal account and use the license keys (emailed to you) to access the course.

Q: Is there an expiration date on the SimPad eLearning course?

A: Yes, 12 months.

Q: What is included in the Integrated SimPad Course?

A: During hands-on, face-to-face instructions, a Laerdal instructor will guide you through the features of SimPad from set up and basic use to advanced simulations.

The course objectives are to train students to;

- Set up and configure SimPad.
- Operate SimPad in Manual and Automatic Modes.
- Operate SimPad with patient simulators, task trainers and standardized patients.
- Register interventions, review logs, and debrief.

Learn how to make the most out of every simulation using SimPad.

10.1 Technical/Warranty Issues

Q: What should I do if my SimPad crashes?

A: Contact Laerdal Customer Service.

Q: If I unscrew the casting of the SimPad, does that void the manufacturer's warranty?



A: Yes, unless specifically instructed to do so by Laerdal Customer Service.

Q: Can I get a new extended warranty for my VitalSim?

A: No you cannot, this is based on the evaluation of the product consistent with existing service procedures for VitalSim.

Q: Can you buy a multi-year protection plan for SimPad?

A: The protection plan is offered for a 2 year period. The protection plan can be purchased up to 60 days after the initial purchase of the SimPad unit.

11 Compatibility with Other Laerdal Products

Q: What products are supported by SimPad?

A: Currently, SimPad and Patient Monitor will support the following existing products as a separate system:

- ALS Simulator
- SimJunior
- SimNewB
- MegaCode Kelly (basic and advanced)
- MegaCode Kid (basic and advanced)
- Nursing Kelly
- Nursing Anne
- Nursing Kid
- Nursing Baby
- Sounds Trainer
- Arrhythmia Trainer
- Blood Pressure Trainer

Q: Can VitalSim manikins be upgraded to wireless patient simulators with SimPad?

A: Yes. The SimPad System is compatible with all current VitalSim patient simulators.

Q: Do I still have the option to have a dual platform for SimNewB, SimJunior and ALS Simulator – utilizing either the SimPad or the PC?

A: Yes. SimJunior, ALS Simulator and SimNewB can be operated from either the SimPad System or a PC with the current software program (requires a software update that will be released Q3 2012) and the Link Box device. Note: The PC and the SimPad remote cannot be used at the same time.

Q: Can customers use their existing SimBaby/SimNewB/SimJunior/SimMom/ALS ELO Patient Monitor with the SimPad System if they purchase the SimPad patient monitor software separately?

A: No, the wired ELO monitors are not compatible with the SimPad System. The ELO monitor can be used with Advanced SimPad bundles for SimNewB, SimJunior and ALS Simulator when operating via the PC.



Q: What is the difference between SimNewB, SimJunior and ALS Simulator Standard and Advanced systems?

A: The Standard configurations are operated by the SimPad System. The Advanced configurations are operated by the Instructor Application (IA) on a PC (or by the SimPad System, if a SimPad remote was purchased separately). The Advanced configuration can be used with the included web camera and optional ELO patient monitor.

On the PC IA, there is an avatar displaying interactive graphics such as the lungs filling during ventilation. The avatar also has drop down/push button functionality to change or initiate an action/sound. Additional features available on the Advanced PC version include CO2 monitoring and multi-media functionality on the ELO patient monitor.

The log functionality for both the SimPad and the PC IA are similar. Interventions done on SimJunior, SimNewB and ALS Simulator such as pulse checks, ventilations start/stop, etc. will be logged. Additional actions, such as introducing yourself to the patient, can be added by the instructor.

Q: Does the SimPad recognize the specific simulator it is connected to?

A: Yes, the Link Box detects which simulator it is connected to. This is communicated to the SimPad and the user interface adapts to the simulator it is connected to.

12 Product Specifications & Certifications

Q: What are the specifications for SimPad?

A:

SimPad:

Size: 158 mm x 126 mm x 25 mm (6.22" x 4.96" x .98")

Weight: 450 g (1 lb.)

Link Box

Size: 140 mm x 9 mm x 30 mm (5.51" x 3.54" x 1.18")

Weight: 200 g (.44 lb.)

Q: Will it have certifications?

A: The SimPad system complies with FCC, Canadian ICES-003 and CE standards. Full details are in the DFU.

Q: What is the capacity of the SimPad hand-held remote? How many scenarios and logs can be stored on the SimPad hand-held remote?

A: The capacity of the SimPad hand-held remote is 200 MB for scenario storage. A typical scenario is about 100-200 KB which would give storage space for approximately 1,000 scenarios.

Q: Where can I find the serial number for my SimPad?

A: There are several locations:



- There is a serial number for the SimPad device on the SimPad System main box (shipping box) and on the device box (the small white box).
- The serial number can be found within the Settings Menu on your SimPad.
- There is also a serial number inside the SimPad device. So, if you have thrown away the boxes and the unit does not turn on, unscrew the SimPad and find a label on the inside with the serial number on it. This should only be done if instructed to by Laerdal Customer Service.

We recommend that you write your serial number on the stickers provided with your SimPad prior to disposing of the boxes.

Q: Can the SimPad System be used in airborne training environment, e.g. evacuation training onboard helicopters etc?

A: The SimPad System has not yet been tested for Air Worthiness. Per the DFU, it should not be used at altitudes higher than 3000m above sea level.

Q: Does it support IPv6 (Internet Protocol Version 6)?

A: No it does not. SimPad is using IPv4.

Q: Is the port speed hard coded?

A: Port speed on a Wi-Fi network is dynamic, from 54 MB to 1 MB.

13 Other

Q: How do you clean SimPad?

A: Unplug the apparatus from communication lines, main power outlet or any power source before cleaning or polishing. Do not use liquid cleaners or aerosol cleaners. Use a lint-free cloth lightly moistened with water for cleaning the exterior of the apparatus.

Q: Can I use the SimPad and my PC at the same time?

A: No, you cannot operate your manikin (SimNewB, SimJunior or ALS Simulator) with the SimPad and the PC simultaneously.

Q: Can I run SimPad software on my iPad?

A: No, the SimPad software must be run on a SimPad device.

Q: Can SimPad be contacted to learning management systems (other than SimCenter)?

A: No, not at this time.

Q: Is the SimPad drop-proof?



A: The SimPad is quite rugged, but it has not been designed to withstand falls from 4-5 feet. The SimPad has been drop tested, but repeated or hard drops will damage the SimPad. It is strongly recommended to use the wrist strap to prevent drops.