



**Gaumard**<sup>®</sup>  
Simulators for Health Care Education

# S3004 - S3005

## PEDIATRIC HAL<sup>®</sup>

### USER GUIDE



Pediatric HAL Simulator is an interactive educational system developed to assist a certified instructor. It is not a substitute for a comprehensive understanding of the subject matter and not intended for clinical decision making.

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# 1. INTRODUCTION

## 1.1 SPECIFICATIONS

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### S3004

- » 14.7 lbs (6.7 kg)
- » 31" (78.7 cm)

### S3005

- » 24 lbs (10.9 kg)
- » 43" (109.2 cm)

## 1.2 CARE AND MAINTENANCE

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**WARNING: The lubricant and other accessories provided are for use with the accompanying patient simulator only. They are not suitable for human use or medical treatment / diagnosis and should never be used for such purposes.**

**CAUTION: Damage caused by misuse may void the manufacturer's warranty. Failure to comply with the following guidelines could result in damage to the equipment.**

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### General

- Do not wrap this or any other Gaumard product in newsprint.
- Marks made with ballpoint pens, ink or marker cannot be removed.
- Do not use povidone iodine on the simulator.
- Replacement parts are available from Gaumard Scientific or from your distributor.
- Please refer to the Appendix for Gaumard's Sales Terms and Conditions and End User License Agreement

### IV Arm

- Only use Gaumard's provided simulated blood. Any other simulated blood containing sugar or any additive may cause blockage and/or interruption of the vasculature system.
- The use of needles larger than 22 to 23 gauge will reduce the lifetime of the lower arms' skin and veins.
- Always purge with clean water, then drain the venous system at the end of each simulation session. Doing so will retard the formation of mold and prevent clogging of the system.
- We recommend flushing veins with 70:30 solution of clean water to isopropyl alcohol (IPA) at least once per month to prolong the life of the vasculature system.

- When the arm skin and/or veins require replacement, refer to the "Spare Parts List" section of this guide. For more information regarding the replacement of veins and other consumable items, please contact customer service.

## Operating Conditions

- Operating the simulator outside these ranges may affect performance:
- Operating temperature: 50°- 95° F (10°- 35° C).
- Humidity: 5%-95% (non-condensing).

## Storage Conditions

- Store the simulator in a cool, dry place. Extended storage should be between 32° - 85° F (0° - 29° Celsius). Other temperatures will cause the simulator to soften and slowly warp
- Do not store the simulator with a discharged battery. Re-charge the backup battery at the end of every simulation session. Recharge the battery at least once every 30 days even if the simulator is not in use, otherwise, permanent loss of capacity might occur because of self-discharge.
- Do not allow any objects to rest on the face or chest skin of the simulator.
- Do not store the simulator face down. Pressure points on the face and chest skin may warp or damage the skin.

---

**CAUTION: To avoid damage to the simulator, store and ship it in the clear poly bag provided.**

---

## Procedures

- Do not attempt to intubate without lubricating the airway adjunct with mineral oil lubricant. Failure to lubricate the device will make intubation very difficult and is likely to result in damage to the simulator.
- Avoid using surgical tools to cut the neck skin. The pre-cut opening allows the insertion of most medical devices. Always lubricate the medical adjunct before insertion.
- Do not introduce flammable gases into the airway.
- Providers must use an empty syringe when simulating drug administration via endotracheal tube. Passing liquids into the trachea or esophagus may cause internal damage.
- Mouth to mouth resuscitation without a barrier device is not recommended, as it will contaminate the airway.
- Treat the simulator with the same precautions that would be used with a real patient.
- The lubricants and other accessories provided are for use with the accompanying patient simulator only. The lubricants and other accessories are not suitable for human use or medical treatment/diagnosis and should never be used for such purposes.

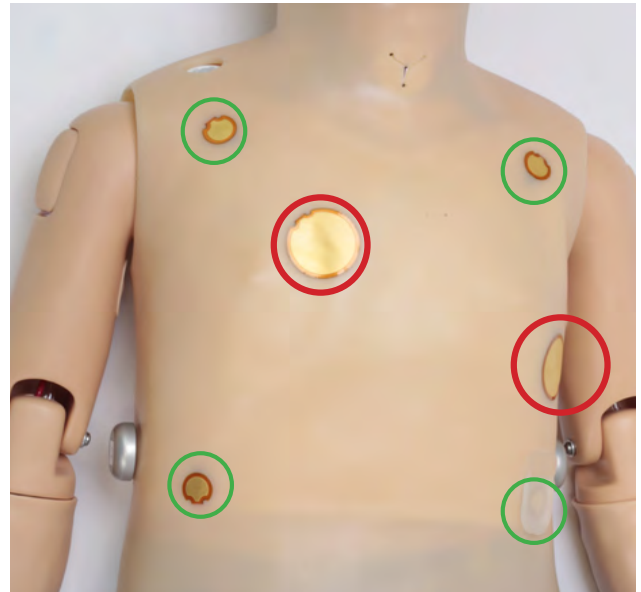
## Cleaning

- Remove all traces of any lubricant from the simulator.
- Do not clean it with harsh abrasives.

- The simulator should be cleaned with a cloth dampened with diluted liquid dish washing soap.
- The simulator is “splash-proof” but not water-proof. Do not submerge or allow water to enter the interior of the simulator.
- Dry the simulator thoroughly and apply baby powder to return the simulator’s skin to its lifelike feel.

## Electrical Therapy

- Always treat the simulator as a real patient.
- Defibrillation is only allowed on the large sternum and apex sites.
- **NEVER** deliver a shock to ECG electrode sites on the shoulders or waist as indicated in green. Doing so will result in internal damage to the simulator. This is considered improper use and is **NOT** covered by the simulator’s warranty. The system will require repair at our facility.



## ECG and Electrical Therapy Warnings

- Only deliver electrical therapy when the simulator is fully assembled, dry, and undamaged.
- Make sure the defibrillation patches on the simulator are in good condition.
- It is a good practice to remove gel residues after every use. Failure to do so will leave behind a film of electrode gel that hardens causing arcing and pitting.
- To aid removal of ECG gel, sprinkle baby powder on the residual ECG gel to dry it up and remove it gently with the pad of your finger.
- Should dark traces appear on the conductive patches due to gel residue or previous arcing, use a pencil eraser to remove the traces and then clean with alcohol.
- Do not re-use the gel-adhesive pads. Do not leave them on for next day use.
- Use hard paddles or wet-gel pads.
- Avoid using solid-gel pads since they present higher risk of burning the simulator’s skin.
- Gel pads have a shelf life. Make sure they are not expired to avoid arcing.
- Make sure the simulator is not in contact with any electrically conductive surfaces.
- Use the simulator only in a well-ventilated area, free of all flammable gases.
- **NEVER** attempt to service or modify any of the electrical connections, especially those between conductive skin sites and the internal electronics.
- Discontinue use if any wires are found exposed with damaged insulation.
- Medical products, such as electrodes, may use powerful adhesives that can be difficult to remove. A gentle, degreasing cleanser may be needed.

- Do not use citric acid cleaners anywhere on the simulator. Doing so will cause pitting of the various materials that constitute your simulator.
- Electrode gel on the skin between any two electrode targets can become a pathway for electrical current. If this occurs, the simulator's skin can be burned.
- DO NOT SCRATCH the conductive patches with abrasive objects; doing so will cause irreversible damage to the conductive sites and subsequently cause arcing.

## 2. OVERVIEW

Pediatric HAL is an advanced life support training simulator equipped with the following features:

### 2.1 FEATURES

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#### Appearance

- Light, medium, and dark skin tones are available
- Articulating neck, jaw, arms and legs

#### Neurological

- Reactive eyes
- Seizures
- Virtual intracranial pressure

#### Airway

- Intubate orally and nasally
- Tracheostomy
- Use ET tube or LMA
- Enable tongue edema
- Perform Sellick's maneuver
- Sync airway sounds with breathing
- Detect depth of intubation
- View and log unilateral chest rise with right main stem intubation
- Improper esophageal intubation causes visible gastric distension

#### Breathing

- Programmable spontaneous breathing
- Independent left or right lung sounds synchronized with breathing
- Bilateral lung expansion with realistic chest rise and fall
- Disable left or right lung to simulate unilateral lung expansion

- Adjustable respiratory rate
- Adjustable respiratory patterns
- Assist ventilation using BVM, ETT, or LMA
- Ventilation is measured and logged
- Adjust virtual oxygen saturation

## Cardiac

- Use real medical equipment at the conductive skin regions to monitor ECG
- Deliver up to 150 joules of energy to skin patches or snap connectors
- Auscultate heart sounds that are synchronized with ECG
- Adjust heart rates
- Perform, measure, and log CPR and depth of chest compressions in the software

## Circulation

- Bilateral pulses (carotid, brachial, radial, and femoral) depend on blood pressure and are synchronized with ECG
- Disable radial pulses independently
- Enable central cyanosis
- Auscultate blood pressure in the left arm with a modified BP cuff
- Audible Korotkoff sounds between systolic and diastolic pressures
- Bilateral IV training arms
- Intraosseous access (IO) at right tibia
- Perform urinary catheterization

## Optional

- Real CO<sub>2</sub> exhalation
- Chest skin with snaps
- Finger stick
- Virtual patient monitor
- Automatic mode
- Wireless streaming audio

## 2.2 TERMINOLOGY

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### Facilitator

The person conducting the simulation; an instructor or lab staff member.

### Palette

A collection of vital signs details that demonstrates a patient's progress or decline during a session.

### Profile

A unique software configuration, including custom palettes, scenarios, and options. Each profile acts as a separate program so, changes made to one profile have no effect on the others.

### Provider

A person participating in the simulation as a healthcare provider.

### Scenario

A saved sequence of physiological states like a play list. Scenarios provide a level of automation that unburdens the facilitator and allows standardized presentation of symptoms.

### Scenario Item

A palette item that is part of a scenario. Scenario Items may also represent a fixed delay period such as "Wait" or a pause such as "Wait Indefinitely."

### Stylus

An electronic pen that operates the tablet computer. The stylus is the fastest and easiest means of controlling the UNI™ software.

### UNI™

The software application used to control the simulator and evaluate care providers.

## 3. INITIAL SETUP

### 3.1 UNBOXING

- Remove the simulator from the blue case carefully with the assistance of at least two persons.
- Avoid lifting the simulator by the arms as it could damage the shoulder joints.
- Rest the simulator on a patient bed or table capable of supporting the weight of a real patient.
- It is recommended that HAL's head rest flat on the bed or on a thin pillow to prevent the face skin from shifting.

### 3.2 PACKAGE CONTENTS



1. Carrying Case
2. Neck Brace
3. Short
4. 100-240 V AC Battery Charger with Label
5. Blood Pressure Cuff
6. Power Supply (S3004 Only)
7. Talcum Powder
8. Leg Bones
9. Interchangeable Genitalia
10. Tape for Tracheostomy
11. Injection Set
12. Mineral Oil Lubricant
13. Wireless Tablet PC with Stylus Control
14. Computer Accessory (Bump Case)
15. RF Communications Module
16. OMNI Link Wireless Adapter (for models with streaming audio option only)

### 3.3 S3004 HAL 1 YEAR'S BATTERY

#### Battery

- HAL 1 Year includes two separate power adapters labeled “Pediatric 1 Year Charger” and “Pediatric 1 Year Power Supply”. Please review the use for each adapter before using the simulator for the first time.
- Pediatric HAL 1 year has a maximum battery runtime of approximately 3 hrs. The battery charge is displayed on the software panel after the connection with the simulator is established. Total runtime is dependent on the breathing rate, volumes, and seizures of the simulator.

---

**CAUTION: Do not store the simulator with a discharged battery. Recharge the battery at the end of every simulation session. If the simulator will not be used for an extended period, recharge the battery at least once every 30 days. Doing so will prevent damaging the battery due to discharging. Refer to "6.2 Battery Etiquette" on page 77 for more information.**

---

#### Charging the S3004 HAL Battery

- The Pediatric HAL 1 Year battery can only be recharged using the Pediatric HAL 1 year Charger while the simulator is off or in standby. Neither the battery charger nor the power supply adapter recharge the battery while the simulator is in use.

**NOTE:** Turn the simulator off and connect the battery charger to recharge the battery

1. Close the UNI software to turn the simulator off
2. Connect the adapter labeled Pediatric 1 Year HAL Charger to the battery port located on the simulator's left side.



3. Align the pins on the charger to the charge port.



4. Connect the charger to the simulator.



5. Allow the simulator to charge for 2-3 hours (or until the charger displays a green light). The charger indicator light will show red during the charge period and green once the process is complete.



6. After the charger indicator light turns green, disconnect the charger. The simulator is ready for use.

**NOTE:** Avoid using the simulator while the battery charger is connected. Please reference the troubleshooting guide for information on how to resolve battery issues.



## Using the Power Supply for the S3004 HAL

- The power supply adapter allows the simulator to operate through long simulation sessions by drawing power from the wall outlet and not battery reserve. Use the power supply for simulation sessions lasting 2 hours or more. If simulation sessions are shorter than 2 hours, using the simulator's battery reserve is recommended.

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**CAUTION: The power supply adapter will not re-charge the battery. Avoid using the power supply adapter if the simulator's battery is completely depleted.**

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## Using the Power Adapter

1. To operate the simulator from using wall power, fully recharge the simulator's battery using the battery charger adapter.



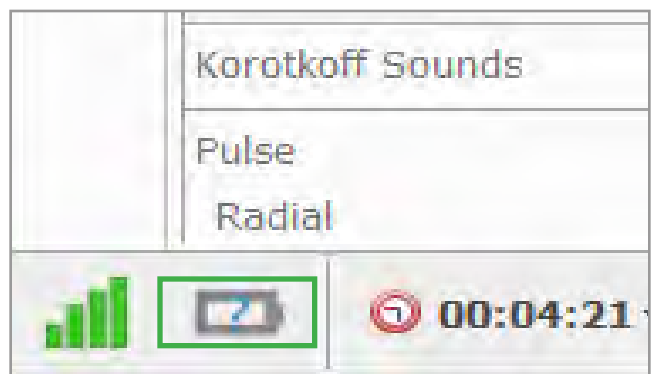
2. Disconnect the charger and connect the power supply adapter.



3. When connecting the power supply to the simulator's port, make sure the pins on the power supply are aligned with the port.



4. Activate the UNI software. The UNI battery icon will display a lightning icon while the power supply is connected.



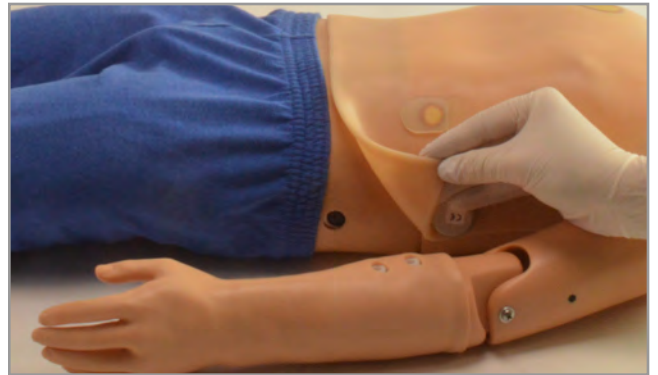
## 3.4 S3005 HAL 5 YEAR'S BATTERY

### Battery

- HAL 5 year is equipped with an internal battery that allows the simulator to operate while untethered.
- Pediatric HAL 5 Year has a maximum battery runtime of **approximately 3 hrs**. The battery charge is displayed on the software panel after the connection with the simulator is established. Total runtime is dependent on the breathing rate, volumes, and seizures.

### Charging the S3005 HAL Battery

1. Close the UNI software to turn the simulator off.
2. Connect the adapter labeled "Pediatric 5 Year HAL Charger" to the battery port located on the simulator's left side.



3. When connecting the "Pediatric 5 Year HAL Charger" to the port, make sure the pins on the charger align with the port.



4. Allow the simulator to charge for 2-3 hours (or until the charger displays a green light). The charger indicator light will show red during the charge period and green once the process is complete.



5. After the charger indicator light turns green, disconnect the charger. The simulator is ready for use.

**NOTE:** Avoid using the simulator while the battery charger is connected. Please reference the troubleshooting guide for information on how to resolve battery issues.



**WARNING:** Do not store the simulator with a discharged battery. Recharge the battery at the end of every simulation session. If the simulator will not be used for an extended period, recharge the battery at least once every 30 days. Doing so will prevent damaging the battery due to discharging. Refer to "6.2 Battery Etiquette" on page 77 for more information.

## 3.5 INITIALIZING THE SIMULATOR WITH UNI™ & RF MODULE

### Turning on the Simulator

1. After reading the manufacturer's care and caution information, press the power button to turn on the Tablet PC.



2. Connect the simulator's USB RF Module to the tablet PC. The control tablet transmits the startup and control commands to the simulator through the USB RF module.

**WARNING:** Use the correct RF Communications Module to turn on the simulator. RF Modules have a SN sticker on the side to confirm the simulator it is intended to work with.



3. The UNI software is preloaded onto the tablet which is used to initialize the simulator and control vital signs. Double click the UNI icon on the tablet's home screen to start.

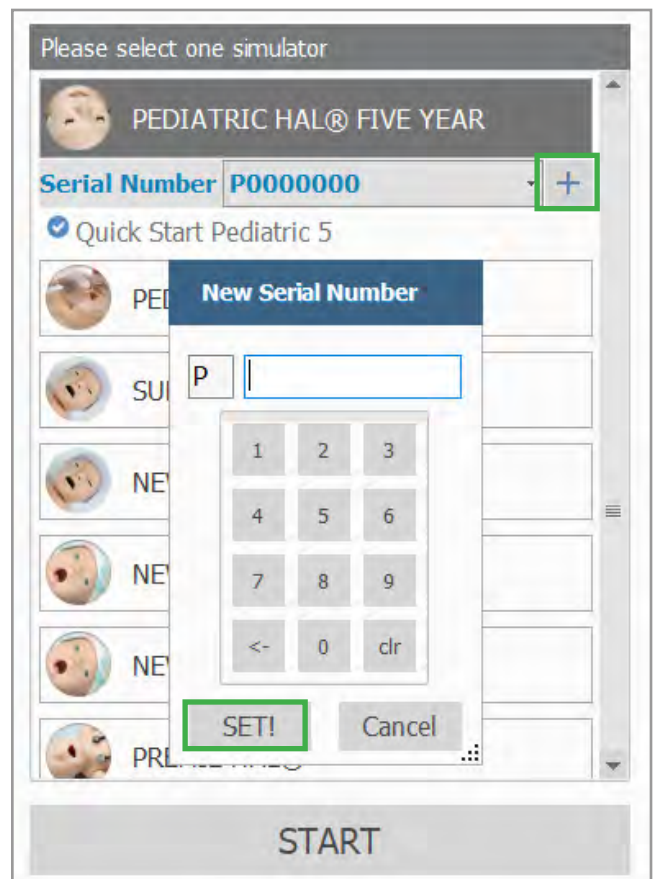
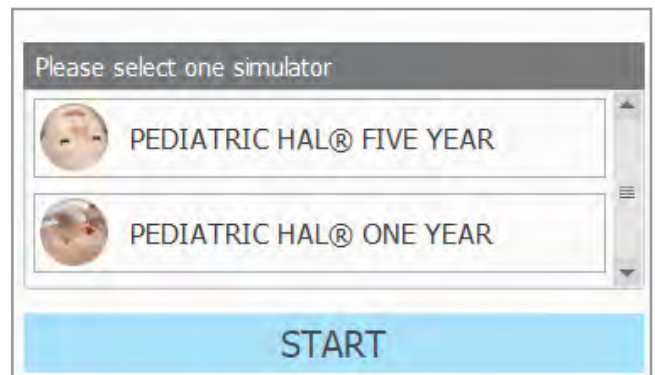


4. The simulator selection menu will appear. Select the corresponding simulator: Pediatric HAL Five Year or Pediatric HAL One Year.
5. When selecting the appropriate profile, be sure that the correct serial number from your simulator is entered into the profile and click Start.

NOTE: If the serial number for the profile is wrong take a moment to enter the correct serial number.

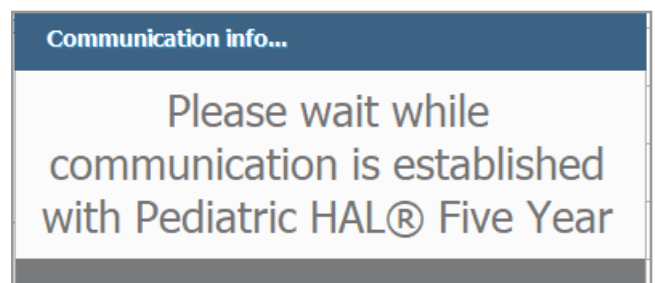
Click the "+" button to the right of the serial number.

A "New Serial Number" pop up will appear. Type in the numerical serial number of the simulator and click Set!



6. Once the software is turned on and loads, the simulator will establish communication and turn on.

NOTE: A pop up will appear stating the simulator is establishing communication and once the gray bar loads completely blue, the simulator will turn on.



### 3.6 INITIALIZING THE SIMULATOR WITH UNI™ & OMNI LINK

The S3004 and S3005 starting with the following serials numbers and above:

- S3004: O2103612
- S3005: P2102461

have, as standard, a modified RJ45 port.

However, only these S3004/S3005 simulators with the streaming audio option will be provided an OMNI Link Wireless Adapter Kit as standard. This allows the simulator to operate via a Bluetooth connection to the UNI tablet/PC.

For S3004/S3005 without the streaming audio and OMNI Link Wireless Adapter Kit, refer to "3.5 Initializing the Simulator with UNI™ & RF Module" on page 16

#### Plugging in the OMNI Link

1. Remove the OMNI Link from its package.



2. Plug the OMNI Link into the RJ45 port on the side of the simulator.



3. Press the power button on the OMNI Link to enable Bluetooth.

**NOTE:** It will flash green when ready.

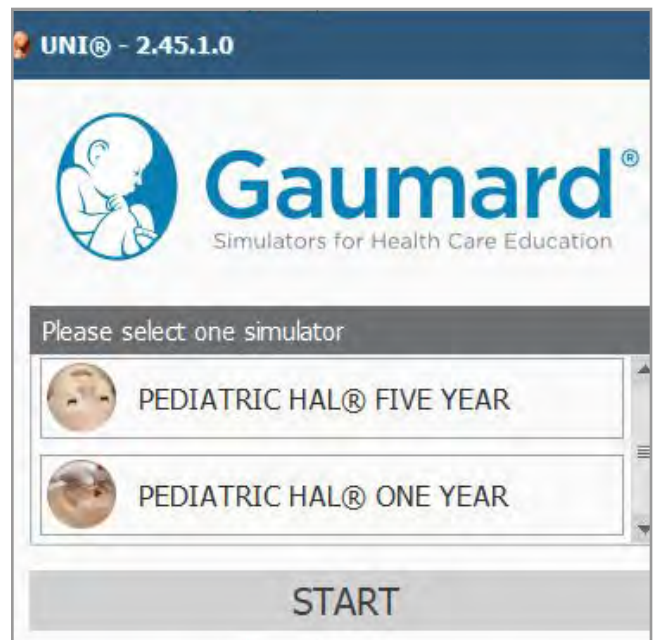


## Turning on the Simulator with OMNI Link

1. Disconnect the RF Module from the UNI tablet/PC.

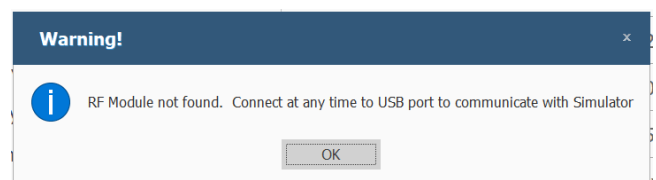


2. Double click the UNI icon and select the correct simulator profile.

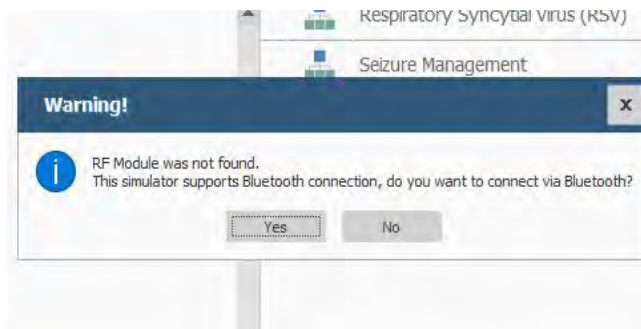


3. Upon software startup, a warning message will appear stating that the RF Module was not found. Click "OK".

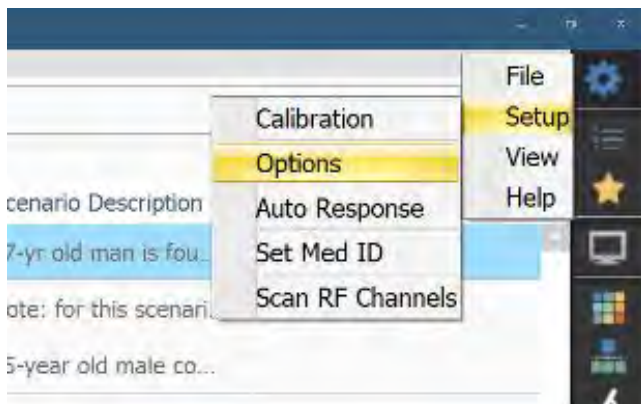
**NOTE:** This is the warning message that appears for the first time use of the OMNI Link with the simulator.



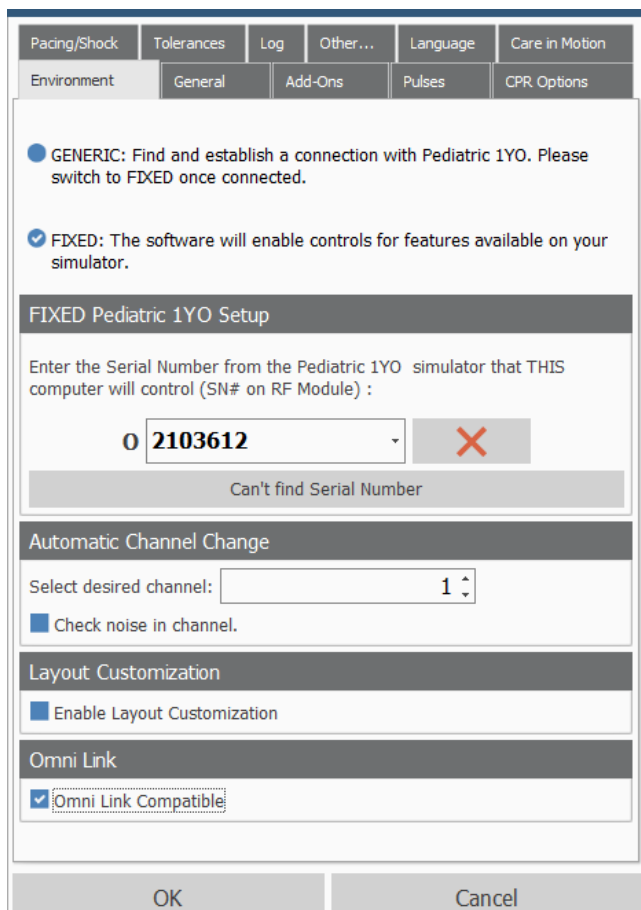
NOTE: After the initial OMNI Link set up, the subsequent warning message will change to one that will detect an available Bluetooth connection in the absence of an RF module and ask if you would like to attempt Bluetooth connection. Select "Yes" in this case.



4. In the UNI software, click the blue gear icon in the upper right-hand corner. Select "Setup" and then "Options".



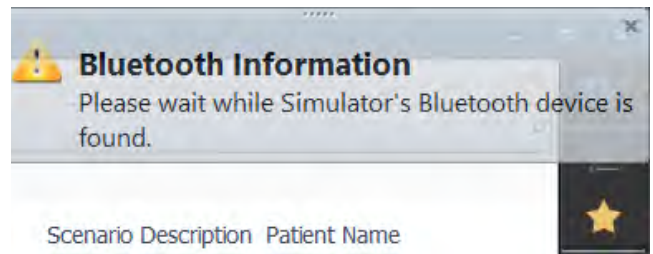
5. Under the "Environment" tab check the "OMNI Link Compatible" box and click "OK".



6. The "Bluetooth Information" message will appear. Allow the simulator to connect.

**NOTE:** The OMNI Link has to be flashing green for the simulator to connect.

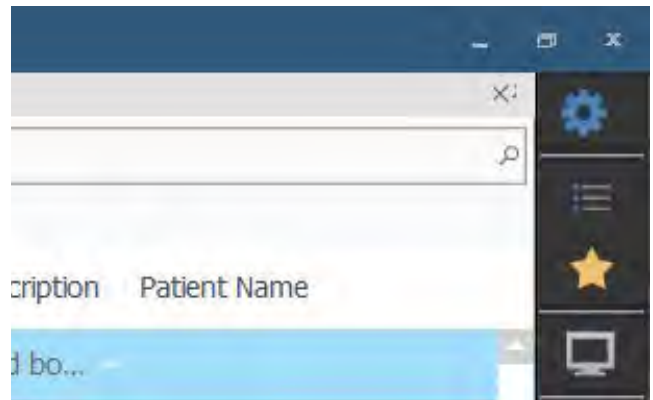
If the OMNI Link is purchased separately from the simulator, the OMNI Link and UNI tablet/PC will need to be paired beforehand.



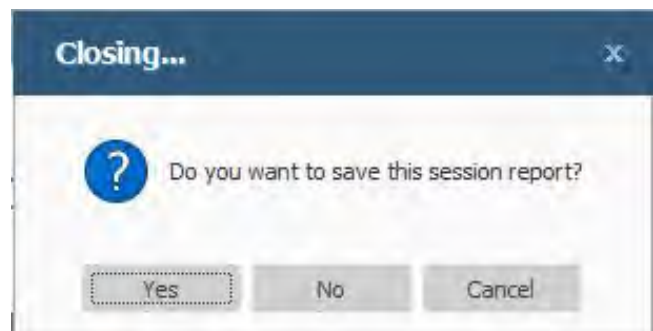
### 3.7 TURNING OFF THE SIMULATOR

To turn off the simulator simply exit out of the UNI software and save any session reports.

1. Click the "x" in the top right corner of the UNI software.



**NOTE:** Once you close the UNI software it may prompt you to save the session report if desired.



## 4. WORKING WITH PEDIATRIC HAL®

### 4.1 NEUROLOGICAL

#### Reactive Eyes

The simulator has programmable blinking eyes and pupils that dilate.

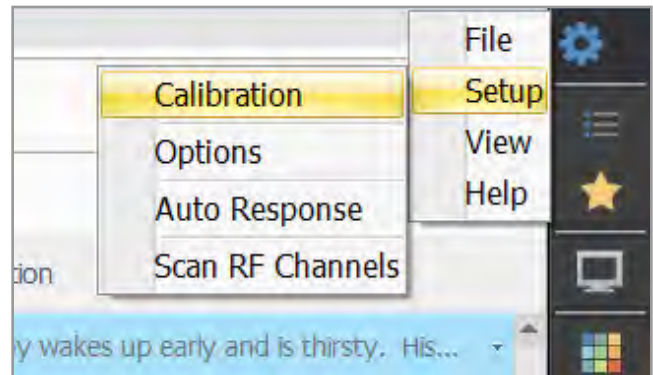
Use the software controls to change the blinking rate and to enable or disable pupil reaction.



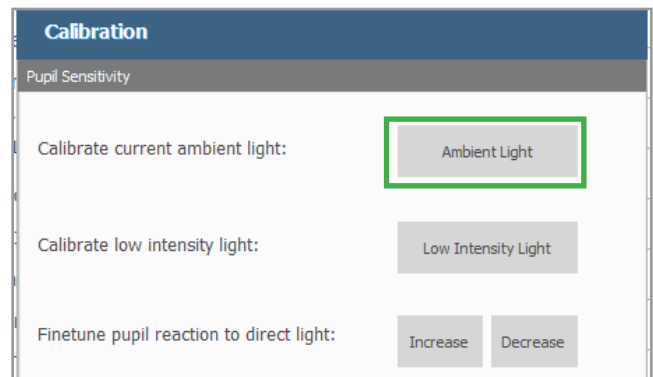
#### Pupil Calibration

The eye reaction is factory calibrated. Use the Pupil Sensitivity controls to recalibrate the pupil reaction for the current room lighting only if needed.

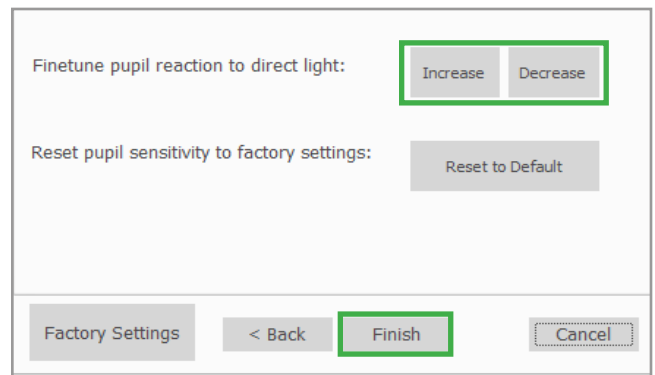
1. Click the blue gear icon in the upper right hand corner of the UNI software then click Setup > Calibration > Pupil Sensitivity and click Next.



2. After clicking "Next" on the Calibration window, click the Ambient Light button to calibrate pupils to current ambient light.

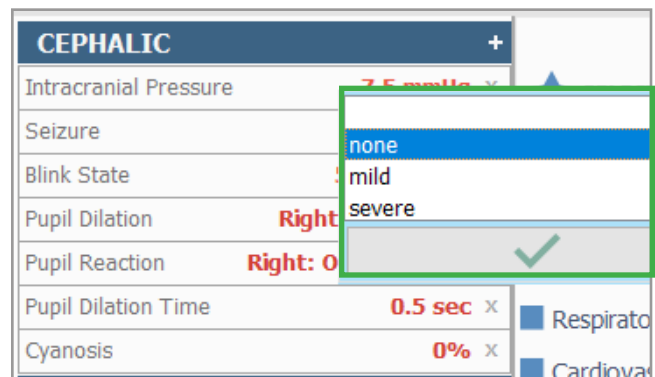
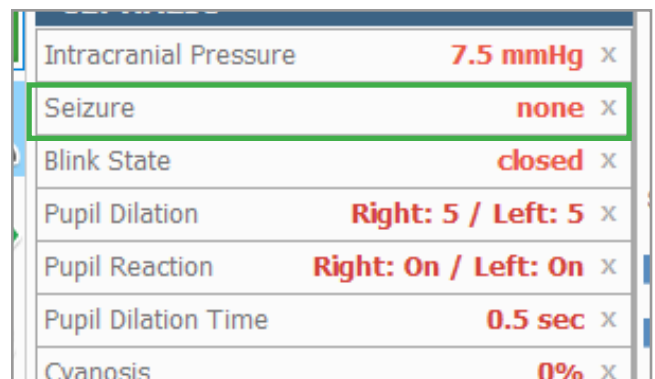


3. To fine tune pupil reaction you may click Increase or Decrease to adjust pupil’s sensitivity to light.
4. Once finished adjusting pupil sensitivity, click Finish.



### Seizures

The simulator is capable of convulsing to simulate none, mild, or severe seizures. Use the UNI software controls to enable the seizure severity.



## 4.2 RECOMMENDED DEVICE SIZES

Procedure	S3005 5 Year	S3004 1 Year
Intubation (Blade size)	Miller 2 or MAC 3	Miller1
LMA	Size 2-2.25	Size 1.5-2
Nasal Intubation	12 Fr catheter	10 Fr catheter
Oral Intubation	Lubricated ETT 5.0 or 5.5 no cuff 10 Fr suction catheter	Lubricated ETT 3.5 no cuff 8 Fr suction catheter
NG/OG tube	10 Fr catheter	10 Fr catheter

**WARNING: Lubricate the endotracheal tube using mineral oil before intubating. Do NOT introduce liquids into the airway or spray mineral oil into the airway. Doing so may permanently damage the system.**

## 4.3 AIRWAY

### Airway Complication

Use the software controls to enable Pediatric HAL’s airway complication feature, Tongue Edema, to make intubation more difficult.

Cyanosis	0% x
<b>AIRWAY</b>	+
Tongue Edema	On x
Throat Sound(Volume)	normal(3) x
<b>BREATHING</b>	+
Chest Rise	
Right	On
Left	On x
Respiratory Pattern	normal x
Respiratory Rate	15 /min x

### Nasal and Oral Intubation

The Pediatric airway supports BVM, nasal/oral intubation, and suctioning with the following medical devices:

- Endotracheal (ET) tubes,
- Nasogastric (NG) tubes, and
- Laryngeal Mask Airways (LMA)



## Intubation

1. Set the simulator's respiratory rate to 0.

BREATHING +	
Chest Rise	
Right	On
Left	On x
Respiratory Pattern	normal x
Respiratory Rate	0 / min x

2. Lubricate the ET tube or airway adjunct with mineral oil.



3. Intubate the simulator.



## Intubation Sensor

- Sensors in the airway detect the placement of the endotracheal tube.
- If the endotracheal tube is inserted too deep, the left lung will automatically be disabled to demonstrate right main stem intubation.
- Once the position of the endotracheal tube is corrected the left lung will be enabled to allow for chest rise.

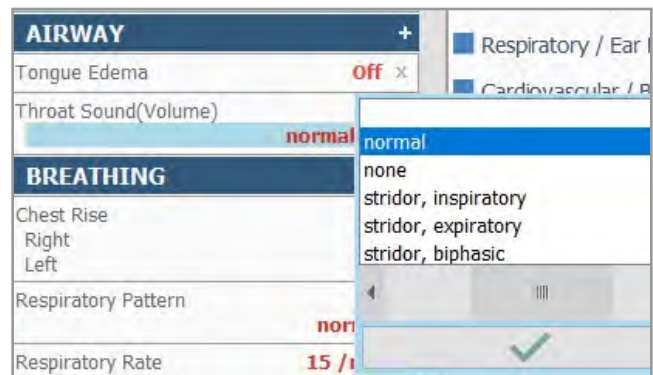
## Gastric Distension

- When performing CPR, excessive ventilation of the esophagus will lead to visible gastric distension.
- To relieve the gastric distension, gently press down on the stomach.



## Airway Sounds

- The simulator produces audible throat sounds.
- Locate the Throat Sounds in the Airway section to change the sound type and adjust the volume. Auscultate using a standard stethoscope.



## Cricothyrotomy / Tracheostomy

Providers can perform a cricothyrotomy through the precut opening on the neck skin. The airway itself features an opening covered with tape that simulates the soft cricothyroid membrane.



**CAUTION: Avoid using surgical tools to cut the neck skin. The precut opening allows the insertion of most medical devices.**

## Replacing the Cricothyroid Tape

1. Turn off the simulator and place it on a clean, flat surface.
2. Unscrew the bolts located on either side of the midsection.



3. Gently slide the skin off each bolt and lift the chest skin to expose the airway.



4. Remove the punctured cricoid tape from the airway and clean away any residual glue.



5. Wrap a new piece of tape around the airway to cover the cricoid opening.

**NOTE:** Ensure that the tape provides an airtight seal to prevent air leaks.



## 4.4 BREATHING

### Bilateral Chest Rise

Bilateral chest rise and fall is automatic.

Use the UNI software controls to:

- Enable or disable the lungs independently
- Select respiratory pattern
- Adjust the breathing rate
- Adjust the virtual inspiratory percentage

BREATHING		+
Chest Rise		
Right	On	
Left	On	X
Respiratory Pattern	normal	X
Respiratory Rate	15 /min	X
Inspiration Percent	33%	X

### Lung Sounds

- The simulator generates anterior, and posterior sounds. Available lung sounds include normal, none, wheezing, inspiratory squeaks, crackles, and rales.
- Use the UNI software controls to select between the available lung sounds and volume levels of each lung independently.

### Volume

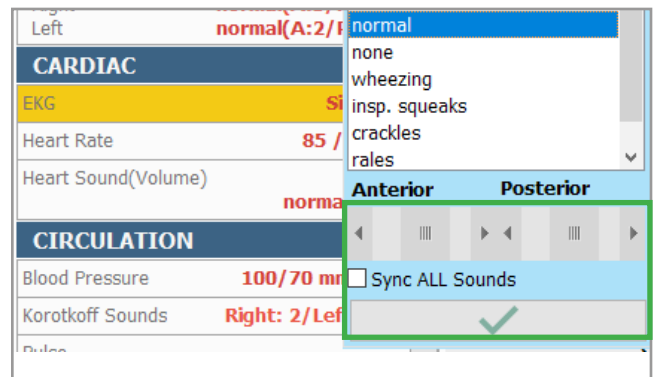
1. Under the Lung Sounds section in UNI, click on either Right or Left.

Lung Sounds(Volume)	
Right	normal(A:2/P:2)
Left	normal(A:2/P:2)

2. Select the desired lung sound.

The screenshot shows the UNI software interface with the 'Lung Sounds(Volume)' section expanded. A dropdown menu is open, listing sound options: normal, none, wheezing, insp. squeaks, crackles, and rales. The 'normal' option is selected. Below the dropdown, there are buttons for 'Anterior' and 'Posterior' sound selection. The interface also shows other vital signs like 'CARDIAC', 'EKG', 'Heart Rate', 'Heart Sound(Volume)', 'CIRCULATION', 'Blood Pressure', and 'Korotkoff Sounds'.

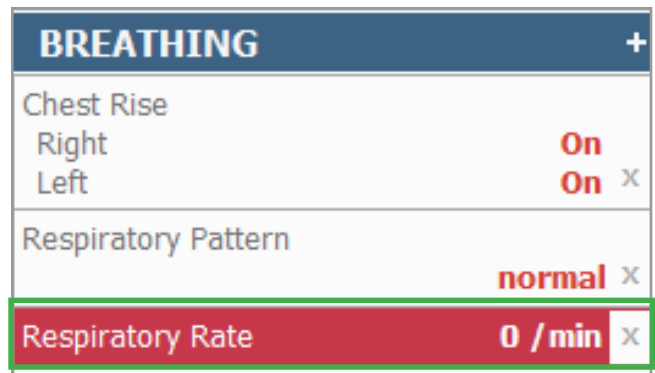
3. Adjust the volume for the Anterior and Posterior positions by sliding the volume bar.



## Ventilation

Complete the ventilation calibration process before using the ventilation feature for the first time.

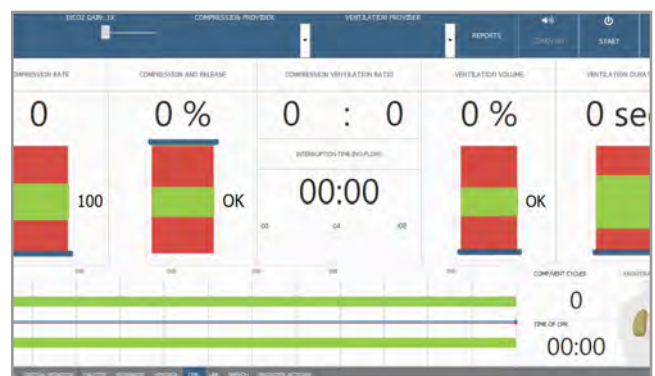
1. Use the UNI software controls to set the respiratory rate to zero.



2. Ventilate the simulator using a standard bag valve mask (BVM).



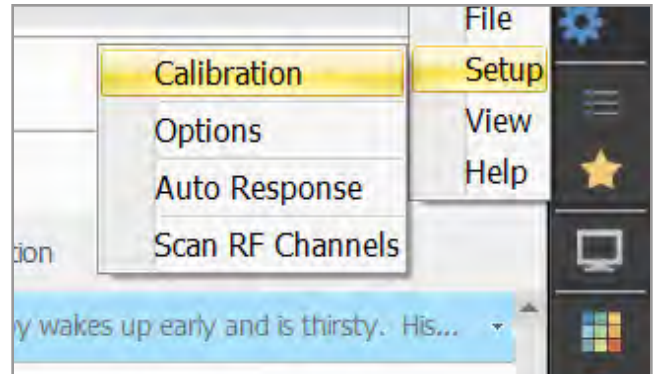
3. Open the CPR window to monitor the provider's ventilation performance in real time.



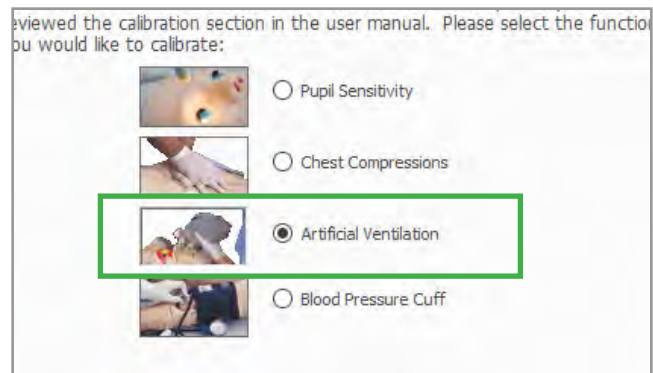
## Ventilation Calibration

- The ventilation calibration wizard records the performance average of five ventilations as the benchmark for correct ventilation.
- Perform the actions requested by the calibration wizard following the most current CPR guidelines. The CPR window will then evaluate the provider's performance based on the benchmark recorded during the calibration process.

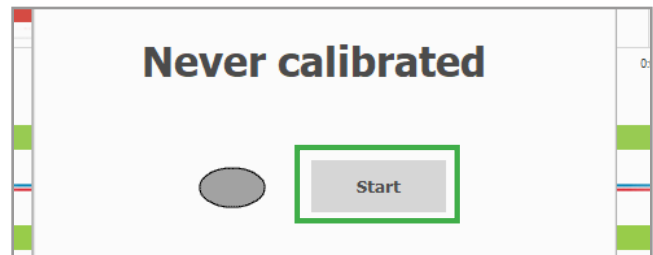
1. Click the blue gear icon in the upper right hand corner of the UNI software then click Setup-> Calibration -> Ventilations and click "Next".



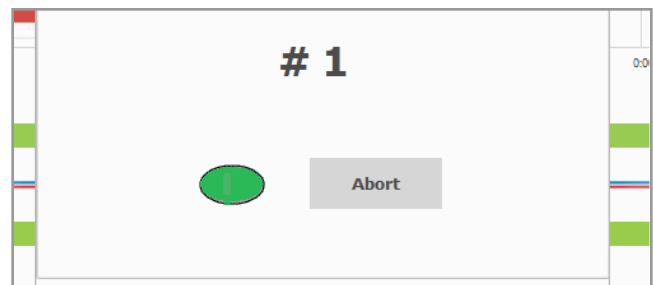
2. After clicking Next on the Calibration window, select to perform a Normal Calibration if you have never calibrated before. Then click the Next button.



3. Click next to open the calibration window, then click Start.



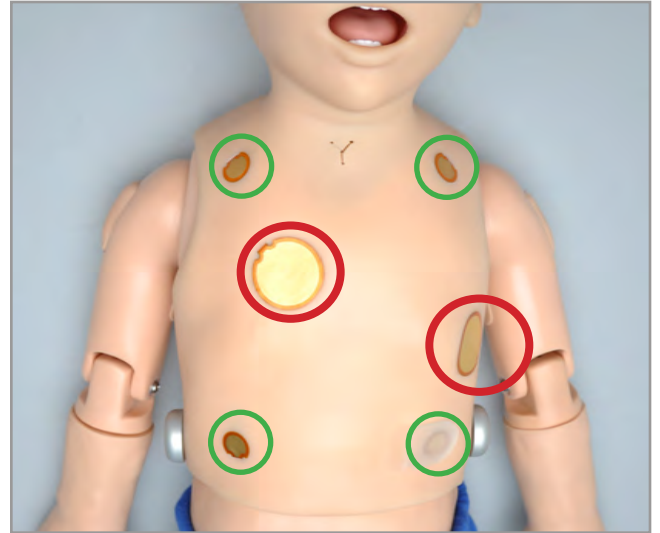
4. Click Start and perform a correct ventilation when prompted for a total of five (5) ventilations. A green oval will indicate that the ventilation was successfully recorded.
5. Follow the cues on the calibration window and click Finish after performing all calibrations.



## 4.5 CARDIAC

### ECG Monitoring and Electrical Therapy

- Pediatric HAL is equipped with conductive skin sites that allow for the attachment of real electrodes and defibrillator pads.
- This feature allows the provider to track cardiac rhythms and events with real medical equipment just as you would with a human patient.
- The simulator's ECG sites can generate detectable waveforms using real medical equipment and standard electrodes. Real automated external defibrillators can detect the simulator's heart rhythm and treat shockable rhythms.

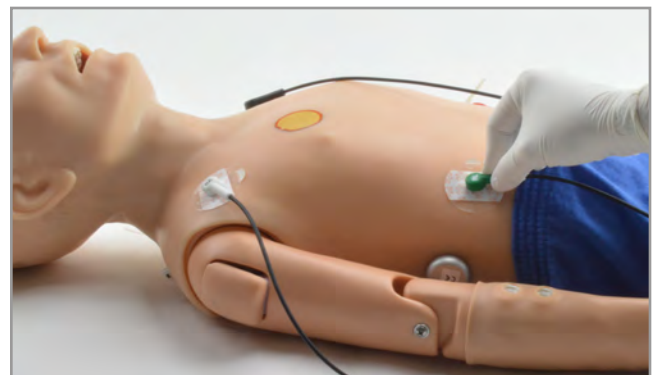


1. Connect ECG gel electrodes to Pediatric HAL's ECG sites circled in green in the photo above.



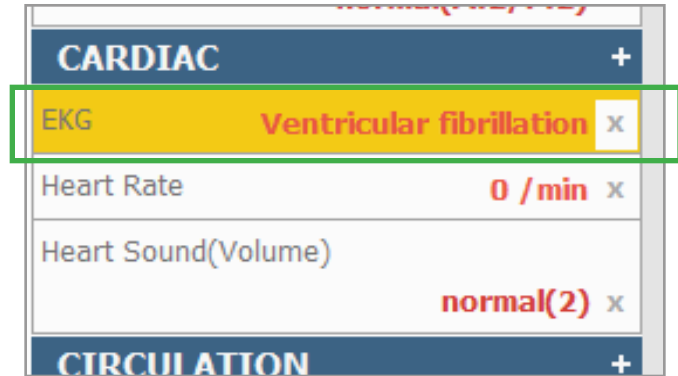
2. Connect the leads to the ECG gel electrodes, then use the UNI software to select an EKG rhythm.

**NOTE:** Follow the operating procedures outlined in the medical device manufacturer documentation.



## Defibrillation

1. Select a shockable EKG rhythm.



2. Connect the defibrillation pads to the large gold patches on the simulator's chest skin circled in red in the adjacent photo.

NOTE: Review the Electrical Therapy Warnings section 1.2 Care and Maintenance section before using the ECG and electric therapy features on the simulator.



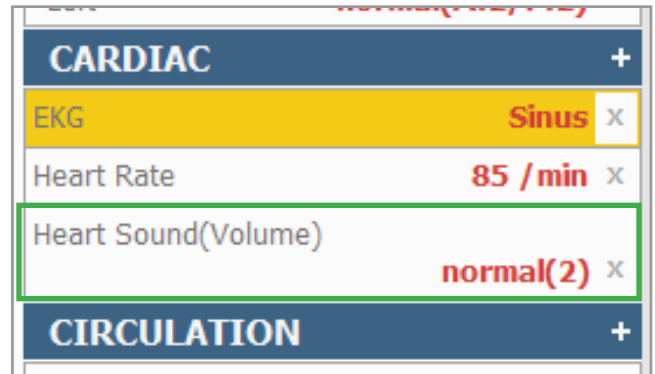
**WARNING: Defibrillation, pacing, and cardioversion is only supported on the large sternum and apex sites/defib posts circled RED. Do not deliver a shock to ECG electrode sites on the shoulders or waist circled GREEN. Maximum amount of energy the pediatric simulators can withstand is 150 Joules. The warranty does not cover damage to the simulator caused by applying electrical therapy to the ECG sites. For exercises that incorporate real electrical therapy of any kind, always follow the safety guidelines and operating procedures outlined in the medical device manufacturer documentation.**

## Heart Sounds

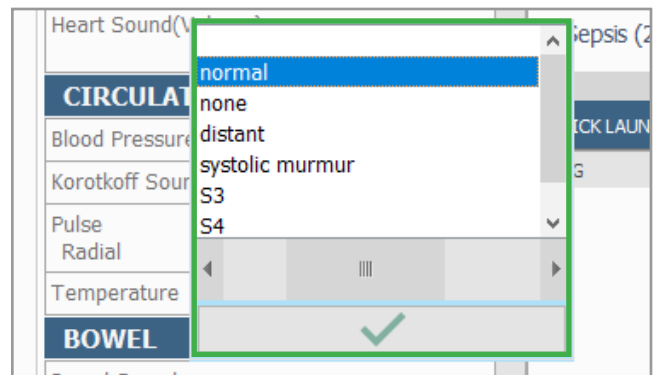
- Pediatric HAL generates audible heart sounds (normal, distant, systolic murmur, S3, and S4) synchronized with the heart rate and selectable rhythms.
- The software controls allow the user to change the heart sound type and adjust the volume level to auscultate with a stethoscope.

## Changing the Heart Sound

1. Select the Heart Sound feature in the UNI under the Cardiac section.



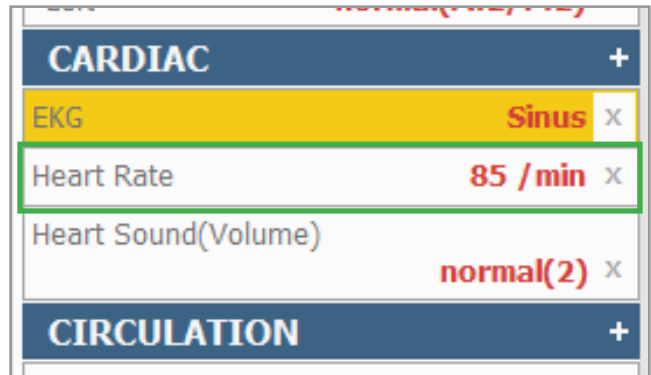
2. Select the desired heart sound and move the gray slide bar to adjust the heart sound volume.



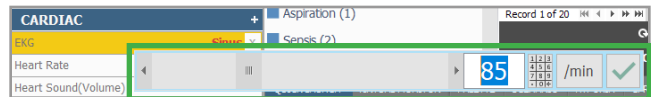
## Adjusting the Heart Rate

Pediatric HAL has adjustable heart rates synchronized with the heart sounds and selectable rhythms.

1. Select the Heart Rate feature in the UNI software under the Cardiac section.



2. Move the gray slide bar or type in the desired rate to adjust heart rate.



## Chest Compressions

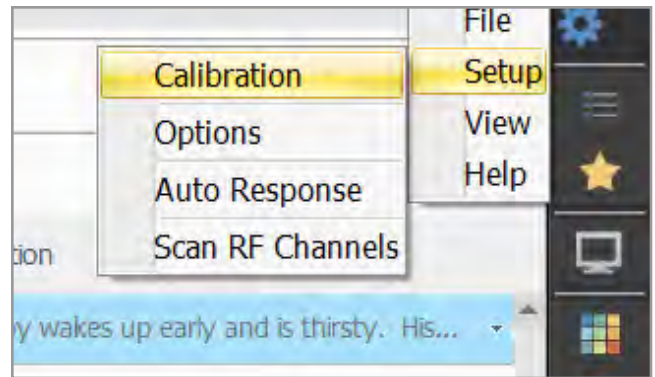
- Set the simulator in a heart rhythm that requires chest compressions, such as asystole.
- Monitor the depth and frequency of chest compressions from the CPR trainer window in the software.
- Before using the chest compression feature for the first time, calibrate chest compressions.



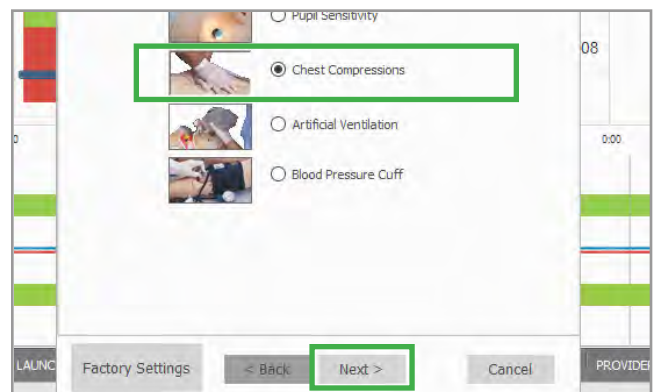
## Chest Compressions Calibration

- The compression calibration wizard will record the performance average of five compressions as the benchmark for a correct compression. The CPR window evaluates the provider's performance.
- Perform the actions requested by the calibration wizard emulating the most current CPR guidelines.

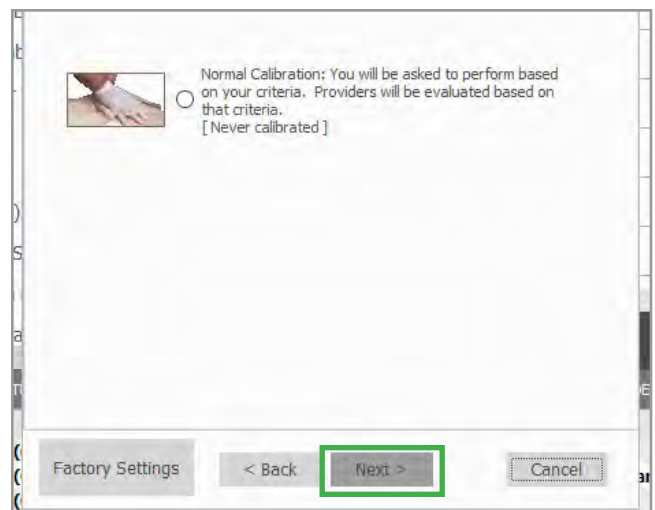
1. To calibrate the compression performance benchmark, click the blue gear icon in the upper right hand corner of the UNI software then click Setup -> Calibration.



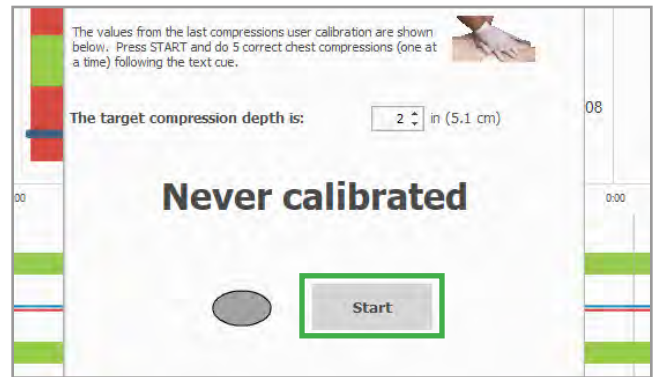
2. On the Calibration menu, select Chest Compressions and click "Next".



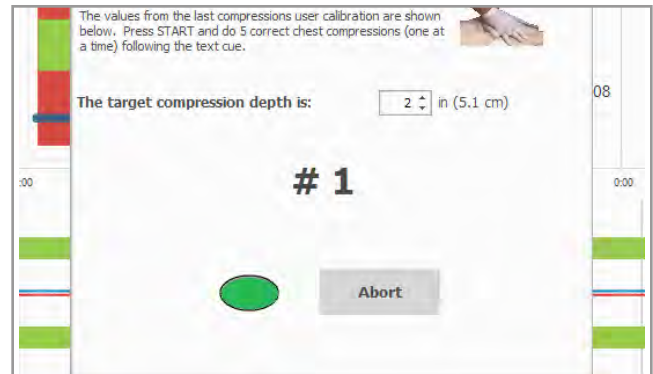
3. After clicking "Next" on the Calibration window, select to perform a Normal Calibration if you have never calibrated before, then click the Next button.



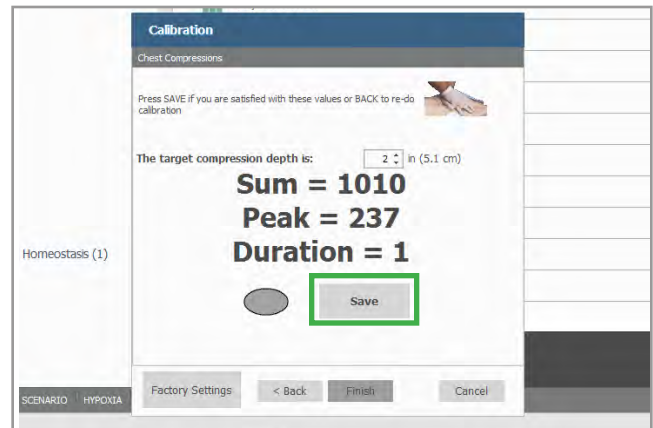
4. The calibration window will appear. Begin performing the calibration compressions.



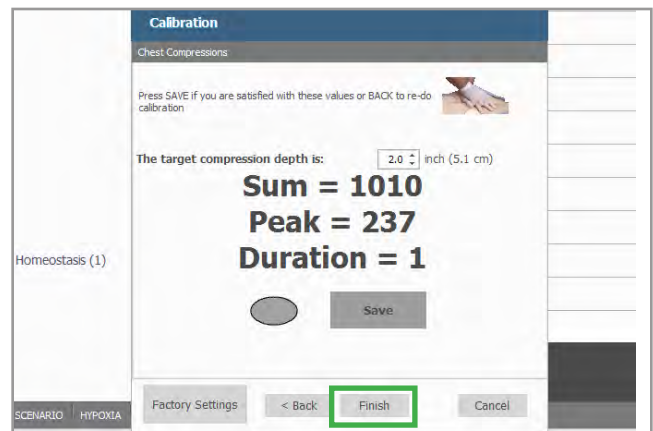
5. Click Start, and perform a correct compression when prompted for a total of five (5) compressions. A green oval will indicate that the compression was successfully recorded.



6. Follow the cues on the calibration window. After performing the five (5) correct compressions, the wizard reports the average peak, pressure, and duration values for the procedure. Click 'Save'.



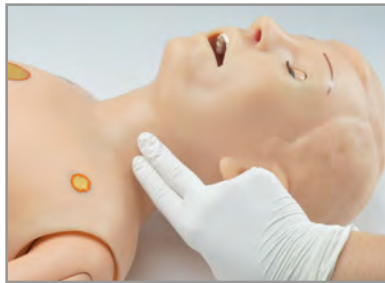
7. At the end of the calibration process, click 'Finish'.



## 4.6 CIRCULATION

### Bilateral Pulses

- Pediatric HAL has bilateral carotid, brachial, radial, and femoral pulses. The simulator's palpable pulses are blood pressure dependent to simulate life-like responses.
- Use the software controls to independently disable radial pulses.

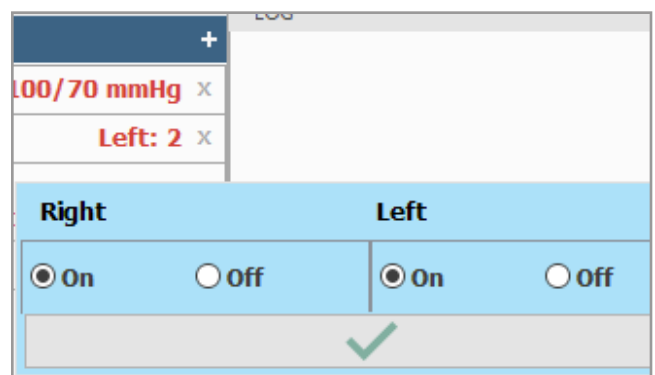


### Disable Radial Pulse

1. Select the Pulse-Radial option in the UNI software under the Circulation section.

CIRCULATION	
Blood Pressure	<b>100/70 mmHg</b>
Korotkoff Sounds	<b>Left: 2</b>
Pulse	
Radial	<b>Right: On/Left: On</b>
Temperature	<b>37.5 °C</b>

2. Disable or enable each radial pulse by clicking the On/off on the left and right side.



## IV Arms & IO Access

- The simulator has bilateral intravenous (IV) arms and an intraosseous (IO) access site in the tibia of the right leg.
- The IV arms allow for bolus or intravenous infusions as well as drawing fluids.
- The IO leg allows for the aspiration and infusion of fluid using real medical devices.

---

**CAUTION: Do not attempt to fill IV system without the drain connector in place. Always leave the drain port connected when injecting fluids into the system.**

**Use only Gaumard's artificial blood concentrate or clean water to fill the vasculature. Any other simulated blood brand containing sugar or any additive may cause blockage and/or interruption of the vasculature system.**

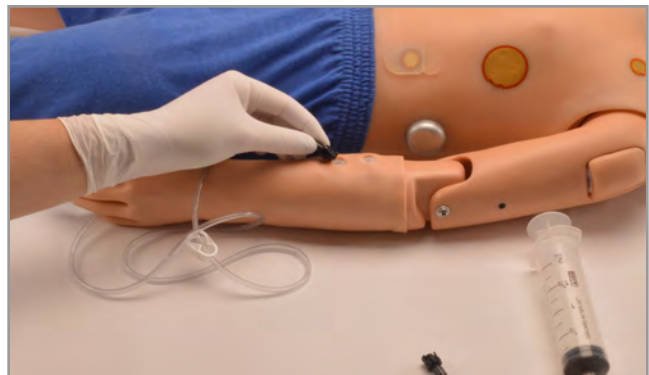
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## Using the IV Arm (S3005 Five Year Old HAL)

1. To prime the IV arm, locate the fill syringe with tubing and the drain tube with the pinch-clamp.



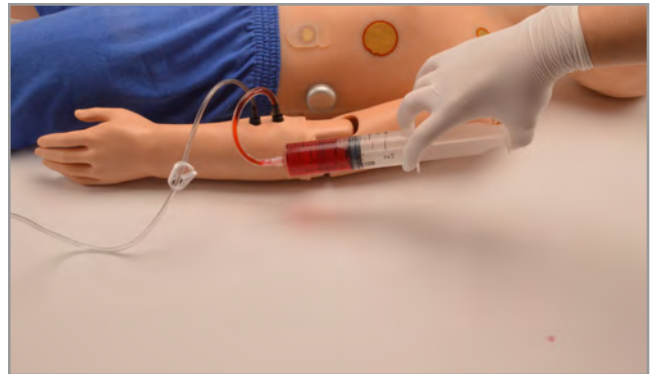
2. Connect the drain tube to one port. Use a receptacle to drain the fluid into.



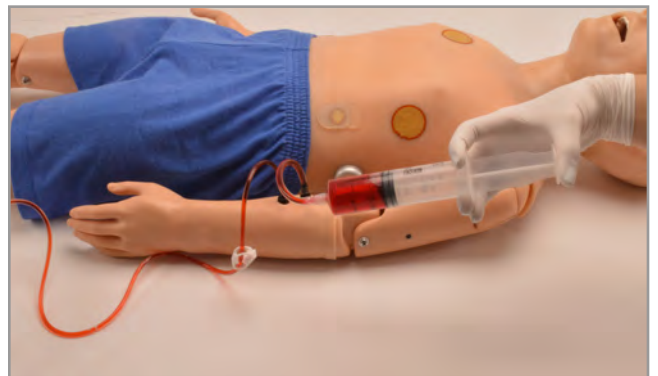
3. Fill the syringe with the desired fluid (water or simulated blood).



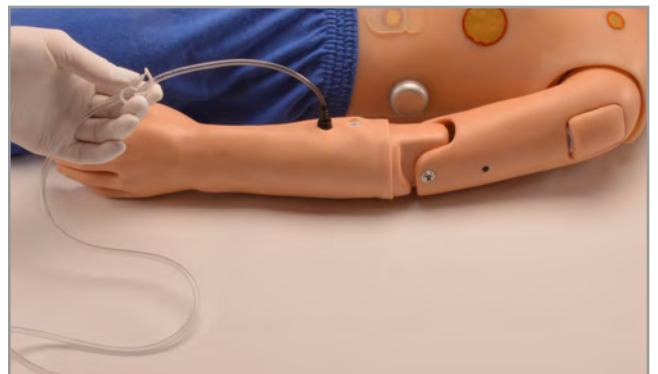
4. Connect the fill syringe to the other port.



5. Push fluid into the system until the fluid exits through the drainage tube into the receptacle and all the air bubbles are purged.



6. Once there are no air bubbles clamp the drainage tube.

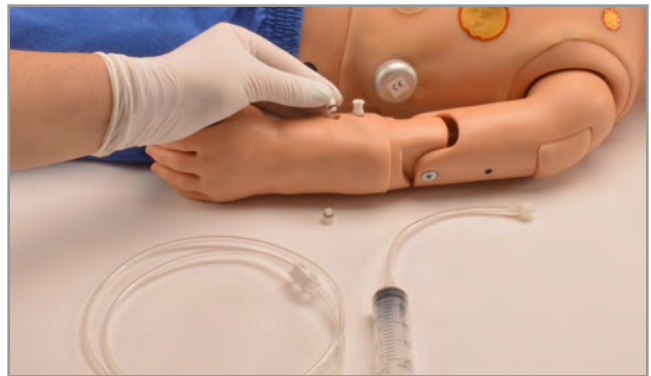


## Using the IV Arm (S3004 One Year Old HAL)

1. To prime the IV arm, locate the fill syringe kit and port adapters. Fill the syringe with fluid.



2. Connect the fill kit adapters to the forearm.



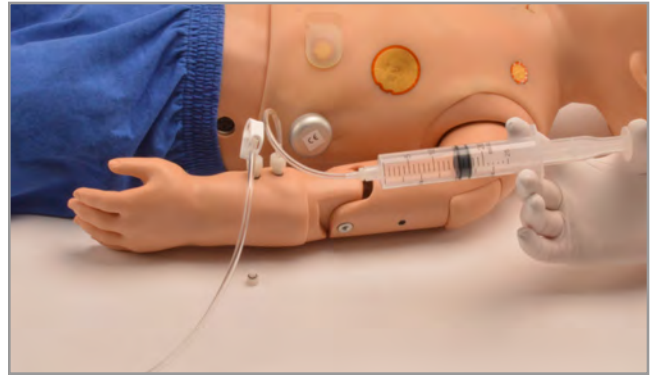
3. Connect the drain tube to one port.



4. Fill the syringe with fluid and connect it to the other port.



5. Push the fluid through the system until there are no air bubbles, then close the pinch clamp on the drain tube.



6. Disconnect the fill syringe from the port and screw in a closed capped adapter. The IV arm is now ready for use.

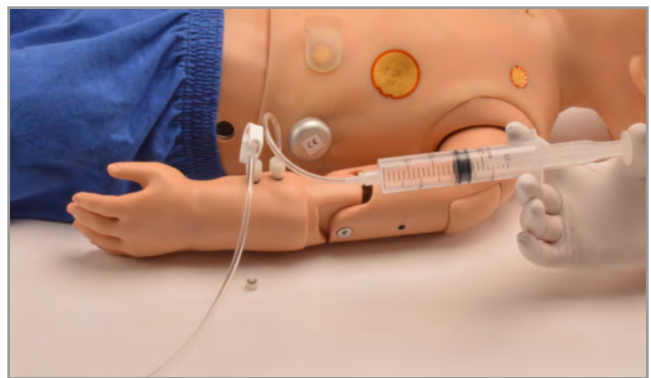


## Simulating Collapsed Veins

1. To simulate a patient with no accessible peripheral IV sites, connect the fill syringe to one of the arm ports.



2. Pull the plunger to create suction. This will collapse the veins.



3. Disconnect the fill syringe from the port while maintaining suction. This will cause the port to seal and the veins will remain collapsed.



### Intraosseous Access Site

Pediatric HAL includes replaceable tibia bones for intraosseous access on the right leg. The hollow bones allow for aspiration and infusion of fluid using real medical devices.

Model	Maximum Infusion Volume (mL)
S3004 HAL 1 Year Old	8
S3005 HAL 5 Year Old	18

1. To fill the tibia bone with fluid, remove the skin cover from the right leg.



2. Remove the tibia insert.



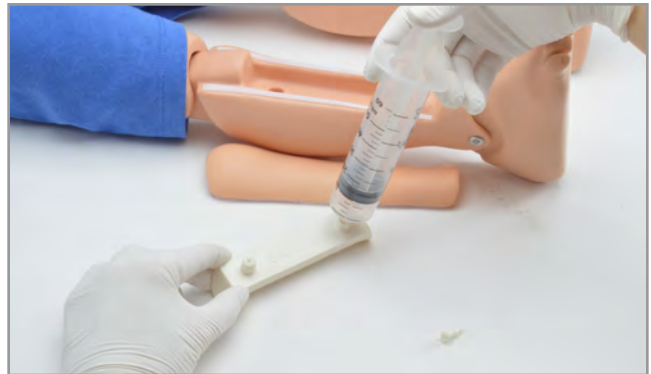
3. Remove the bone's reservoir cap with the aid of a flat head screw driver (not provided) to lift the caps off.



4. Use a pair of pliers (not provided) to pull out the reservoir caps.

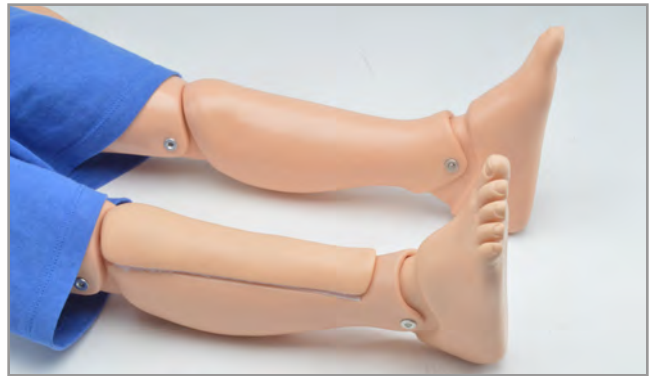


5. Use the fill kit syringe to fill the bone reservoir with fluid.



6. Insert the tibia bone in the leg and attach the skin cover.

**NOTE:** Intraosseous access is only supported on the hollow tibia insert. To view a list of replacement parts, including skin covers and tibia bones, see the Spare Parts list in the Appendix.



## Blood Pressure

- Connect the modified blood pressure cuff's line to the port on the simulator's left shoulder.
- Before using the blood pressure feature for the first time, place the modified cuff on the left arm and calibrate it using the calibration wizard.

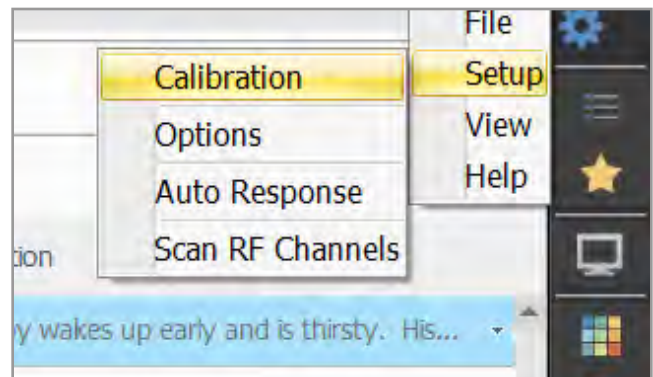


## Blood Pressure Calibration

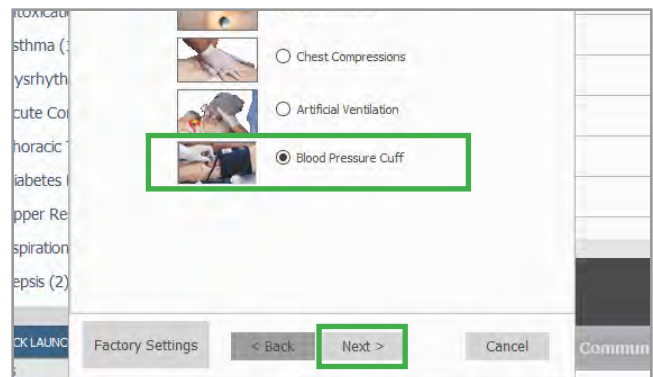
1. Place the blood pressure cuff on the simulator as it would be placed on a real patient.
2. Connect the modified blood pressure cuff's line to the port on the simulator's left shoulder.



3. Click the blue gear icon in the upper right corner of the UNI software, then click Setup -> Calibration.

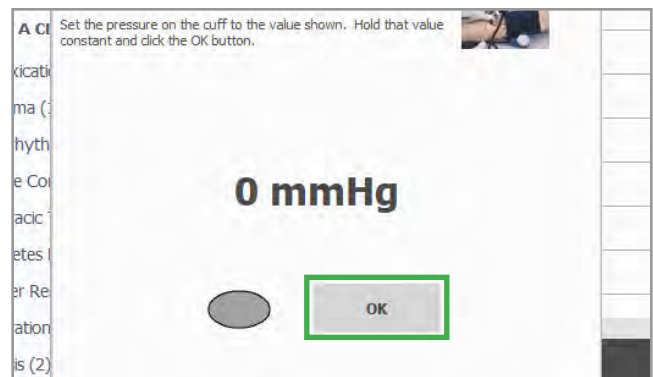


4. On the calibration menu select Blood Pressure Cuff and click Next



5. Set the pressure on the cuff to 0 mmHg. Then click the OK button.

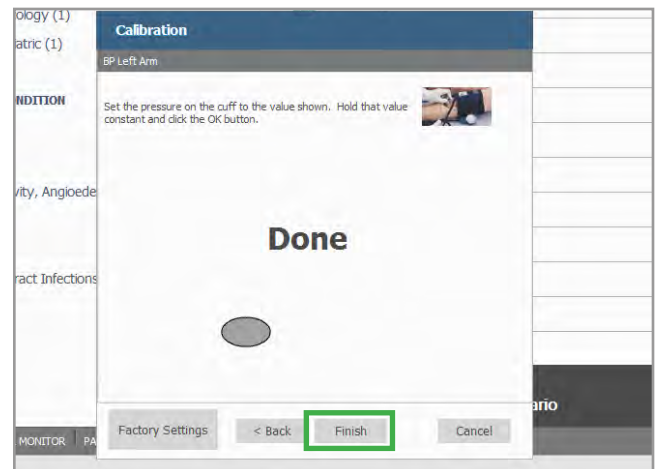
**NOTE:** After clicking OK, the calibration window will prompt for the blood pressure cuff to be set to a specified pressure.



6. Set the sphygmomanometer to the pressure that appears on the screen when prompted. A green oval will indicate that the pressure was successfully recorded.



- At the end of the calibration, click Finish to close the calibration wizard.



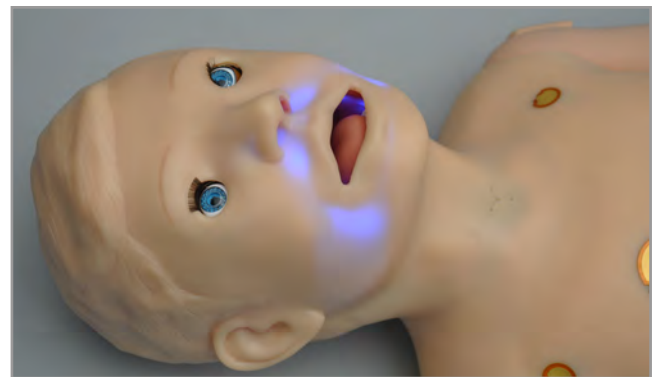
## Oxygen Saturation Placement

Pediatric HAL has an oxygen saturation feature that allows for placement only of a device on his left index finger.

This feature began implementation since serial numbers O2107627 and P2106499.

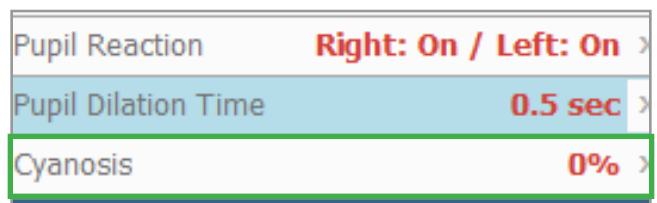
## Central Cyanosis

- Pediatric HAL exhibits central cyanosis around the mouth.
- The software controls may be adjusted for cyanosis intensity ranging from 0% - 100%.
- While adjusting the cyanosis, the Hypoxia tab monitors treatment of cyanosis to show either improvement or deterioration of the condition.

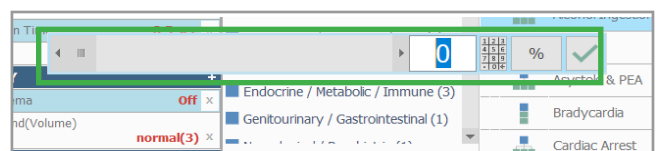


## Adjusting Cyanosis Intensity

- Under the Cephalic section in the UNI software, select Cyanosis.



- Use the gray slide bar or type in the desired percentage of cyanosis within the range of 0% to 100%.



## Urinary Catheterization

Pediatric HAL has an internal bladder for catheterization exercises.

Model	Max Infusion Volume (mL)	Catheter Size
S3004 HAL 1 Year	48	8 Fr
S3005 HAL 5 Year	90	8-10 Fr (Straight/Rigid)

### Filling the Bladder

1. Place the simulator face down to reveal the bladder fill port.



2. Fill the syringe with fluid.



3. Connect the fill kit syringe to the bladder fill port and inject fluid into the bladder.



### Instructions for Use

Catheterize the simulator using the appropriately sized catheter lubricated with mineral oil.

**NOTE:** At the end of the exercise, drain the fluid from the bladder and clean the reservoir with a water and isopropyl alcohol (70:30 ratio) mixture to prevent mold from forming.



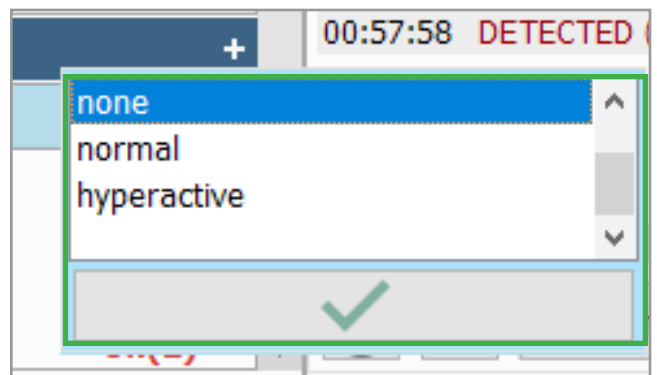
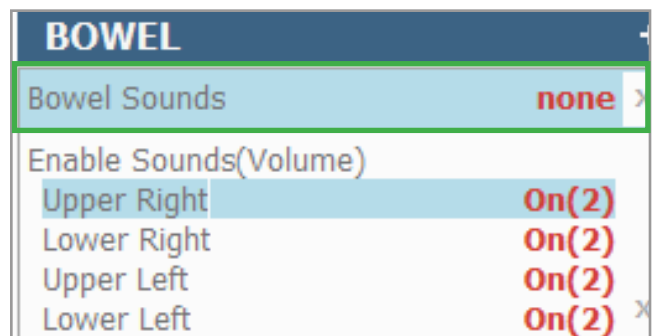
## 4.7 GASTRIC

Pediatric HAL simulates normal, hyperactive, or no bowel sounds. The bowel sounds may be independently enabled or disabled with the volumes adjusted for auscultation.

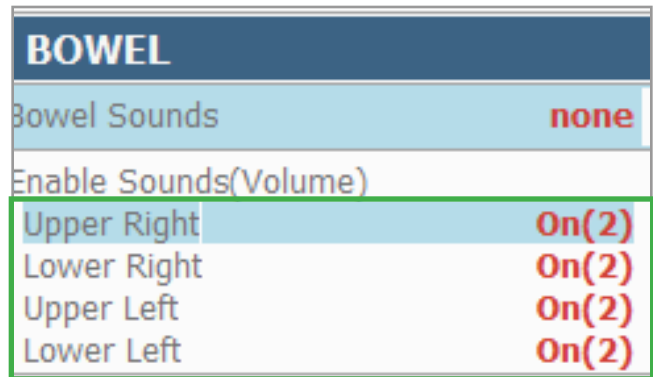


### Selecting Bowel Sounds

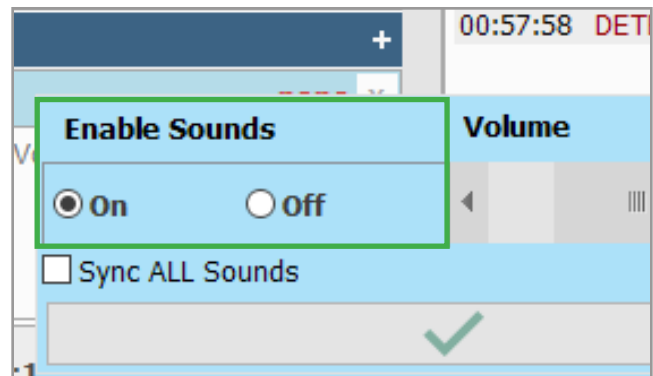
- Under the Bowel section in the UNI software, select Bowel Sounds.
- Select the desired bowel sound from the list: none, normal, or hyperactive.



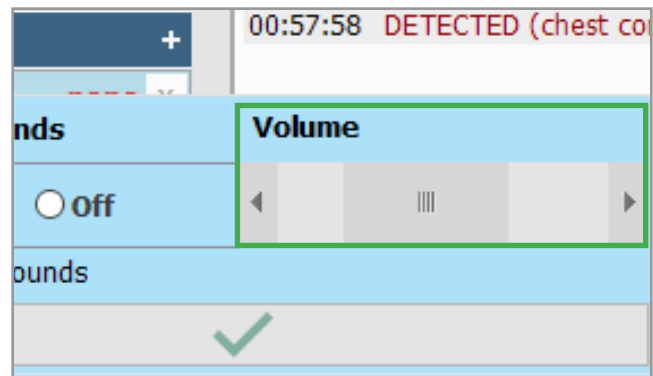
3. Adjust the volume in the Bowel section in the UNI software. Select either Upper Right, Lower Right, Upper Left, or Lower Left.



4. Once the desired bowel location is selected, a pop up menu will prompt you to enable or disable the bowel sound for the specific location.



5. On the same pop up menu, use the gray slide bar to adjust the volume of the bowel sound for the specific location.



## 5. OPTIONS

### 5.1 REAL CO<sub>2</sub> EXHALATION

- Both the S3004 (after February 2016) and S3005 (after January 2016) simulators can exhale real CO<sub>2</sub> via a CO<sub>2</sub> cartridge.
- Once a CO<sub>2</sub> cartridge is installed, use the software controls to adjust the volume of CO<sub>2</sub> exhaled. The simulator can also be operated without a CO<sub>2</sub> cartridge installed. A virtual CO<sub>2</sub> value is displayed on the virtual monitor.
- Due to shipping regulations, CO<sub>2</sub> cartridges are not included with the system. The required 16g threaded CO<sub>2</sub> 3/8"-24UNF-1A cartridges can be purchased at most bicycle or hardware stores.



---

**WARNING: Review the safety and warning checklist below before using the CO<sub>2</sub> feature. Failure to comply with the warnings listed below and those included with the original cartridge packaging may result in serious personal injury.**

---

- » Always follow the manufacturer's safety and warning information included with the CO<sub>2</sub> cartridge package
- » Never point a CO<sub>2</sub> cartridge at yourself or others
- » Do not use damaged CO<sub>2</sub> cartridges
- » Do not puncture the cartridge CO<sub>2</sub> seal manually
- » Do not expose the CO<sub>2</sub> cartridges to high temperatures as indicated on the product's packaging
- » Install threaded cartridges only (3/8"-24UNF-1A). Do not attempt to install a cartridge that does not meet the specifications in this document.
- » Do not over tighten the cartridge into the simulator's cartridge harness
- » Always verify that the CO<sub>2</sub> cartridge is empty through the software diagnostics before removing it.
- » Do not remove the CO<sub>2</sub> cartridge if the simulator is not fully operational

## Installing the Cartridge

1. Securely hold the bottom of the CO<sub>2</sub> cartridge's protective case with one hand and open it by twisting its top counter clockwise with the other hand



2. Continue to twist the protective case's top until it comes off.

**NOTE:** If there is a cartridge inside already, please refer to the "Removing the Cartridge" section below.



3. Align and insert the new cartridge into its slot on the bottom half of the protective case ensuring that the threads are aligned.



---

**CAUTION:** Once you have started inserting the cartridge, do NOT stop or attempt to unscrew the cartridge. The casing will puncture the cartridge seal during the tightening process.

---

4. Screw the CO<sub>2</sub> cartridge into the case until it is tightly secured.

**NOTE:** The cartridge will feel cool to the touch as the case pierces the cartridge seal.



- When the cartridge is completely and firmly in its slot, place the top of the cartridge's protective case back into position and twist it back on firmly.



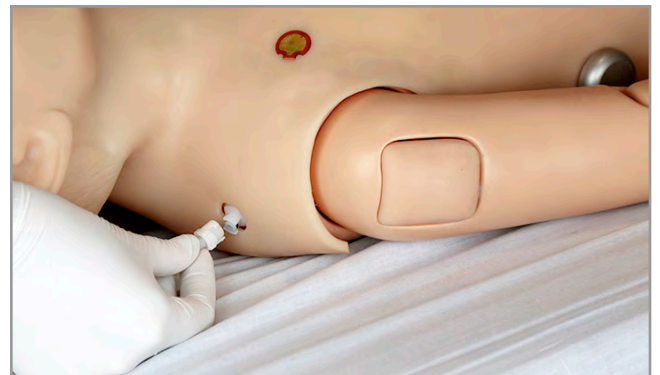

---

**WARNING: Hand tighten ONLY. Do NOT over tighten.**

---

## Connecting the Cartridge to the Simulator

- Secure the cartridge to the simulator by using the Velcro strap



- Bring the CO<sub>2</sub> connecting tube to the right upper back of the simulator's shoulder and secure it into the port.

**NOTE:** The port is a luer-lock fitting that requires a quarter turn movement to fasten the connector in place.



3. Ensure the connections are firmly secured and locked in place before proceeding with use.

**NOTE:** If needed, the cartridge may be placed further away from the simulator through the use of the 24" white extension tube.



4. Attach the extension tube to the simulator then to the connecting tube on the cartridge.



## Adjusting CO<sub>2</sub> Output

After the cartridge is installed, adjust the Lung CO<sub>2</sub> parameter in the Breathing section of the UNI software to increase or decrease the volume of exhaled CO<sub>2</sub>.

BREATHING		+
Chest Rise		
Right	On	
Left	On	x
Lung CO <sub>2</sub>	0	x
Respiratory Pattern	normal	x
Respiratory Rate	15 /min	x

## Removing the Cartridge

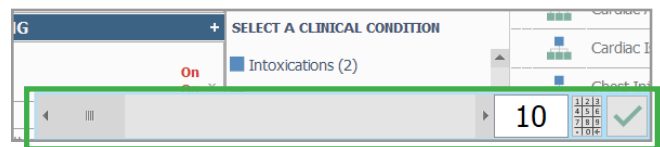
- Before replacing the cartridge, please ensure that the cartridge is empty.
- To exhaust the contents of the CO<sub>2</sub> cartridge, turn on CO<sub>2</sub> in the software until CO<sub>2</sub> is no longer detected.

## Activating CO<sub>2</sub> Output

1. Under the Breathing section, select Lung CO<sub>2</sub>.



2. Use the gray slide bar, that ranges from 0-10, or type in the value to adjust the level of CO<sub>2</sub> exhaled. To deplete the CO<sub>2</sub> cartridge faster, raise the level of Lung CO<sub>2</sub> to 10.



3. Securely hold the bottom of the CO<sub>2</sub> cartridge protective case with one hand and open it by twisting the top counter-clockwise with the other hand.



4. Continue to twist the protective case until the top comes off.



5. When the top comes off of the protective casing, you will see the cartridge.



6. With the cartridge completely spent, twist the cartridge counter-clockwise to unfasten it for removal.



7. Remove the cartridge.



---

**WARNING: Do not point the CO2 cartridge at yourself or others.**

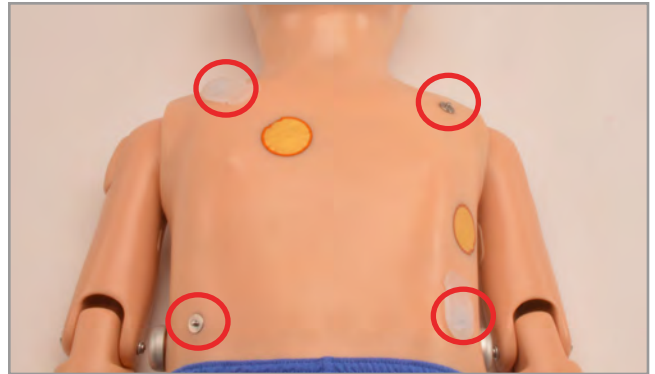
---

## 5.2 CHEST SKIN WITH ECG SNAPS

At initial time of purchase, Pediatric HAL has the option of a chest skin with:

- ECG snaps with Defibrillation patches (as shown here),
- ECG patches with Defibrillation snaps
- ECG and Defibrillation snaps.

\*subject to additional cost

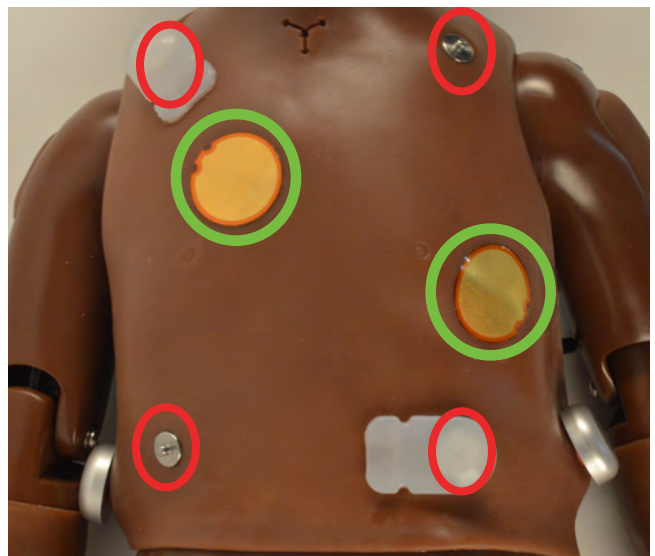


## 5.3 DEFIBRILATION SNAPS

Defibrillation and pacing are only allowed on the large sternum, apex, and/or posterior sites (circled in GREEN).

NEVER deliver a shock to ECG electrodes (circled in RED). Doing so will not create a fire hazard, nor is there risk of shock to the provider, but internal damage in the simulator may result. This situation is considered improper use and is NOT covered by the simulator warranty.

There are inherent dangers in the use of some medical devices. For simulations that incorporate electrical therapy of any kind, always know your equipment, and follow the device manufacturers' safety guidelines.



## Defibrillation Snap Connectors

The defibrillation snap connectors and the "Snap Adapter Cable" allow providers to deliver electrical therapy at the sternum and apex sites without the use of frequent replacement of pads or patches.

The defibrillation snap sites provide the same electrical therapy functionality as the large gold patches on the front of the chest skin. The difference is that when using the defibrillation snap sites, they provide easier medical equipment hook up and faster clean up.

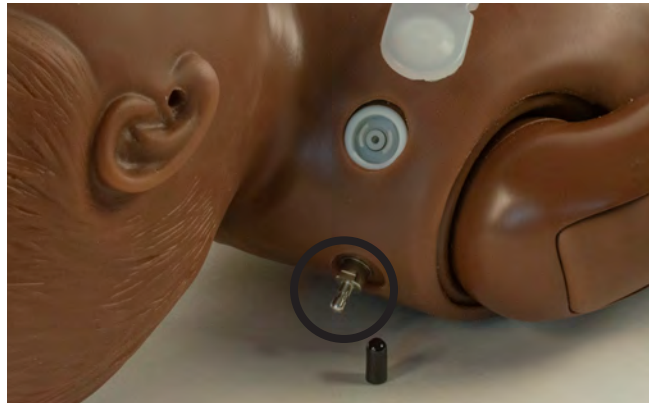
The defibrillation snap sites are only functional when the internal defibrillation snap harness is connected.

It is recommended to adjust the internal defibrillation connections as part of the simulation setup.

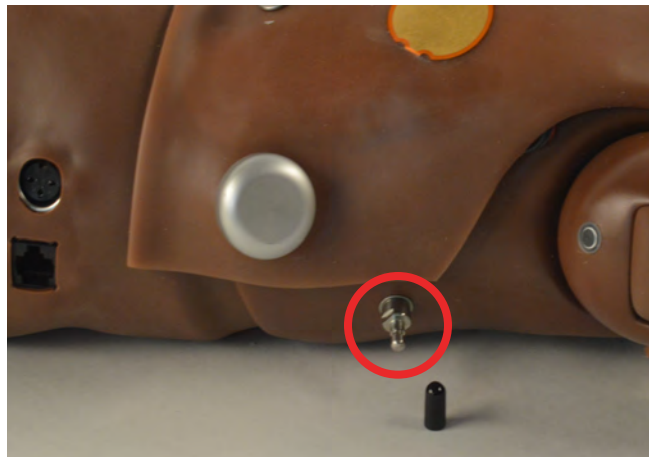
This means prior to the start of your simulation determine the desired path to deliver energy, either using the defibrillation snaps or the defibrillation large gold patches, and secure that connection.

When the internal defibrillation connection is secured for the snaps it will disable the chest skin sternum and apex large gold patches and vice versa.

### Sternum Snap



### Apex Snap




---

**WARNING: Only deliver a maximum of 150 Joules to the pediatric simulator when performing defibrillation via the large gold patches or the defibrillation snap sites. Remember to secure the appropriate internal defibrillation connection prior to delivering energy to the site.**

---

To adjust the internal defibrillation connections to enable the snap sites:

1. With the simulator turned OFF, unscrew the silver knobs on both sides of the torso.



2. Gently lift the chest skin off of the silver rod.



3. Flip the chest over the face of the simulator. Notice the red and black wire attached to the chest skin. This is the cable used to connect the defibrillator options. Keep track of this cable.



4. Flip over the grey foam and ribcage of the simulator to move it out of the way while you work.



5. Take notice of the two silicone lung bags and flip them over the torso of the simulator to keep them out of the way.

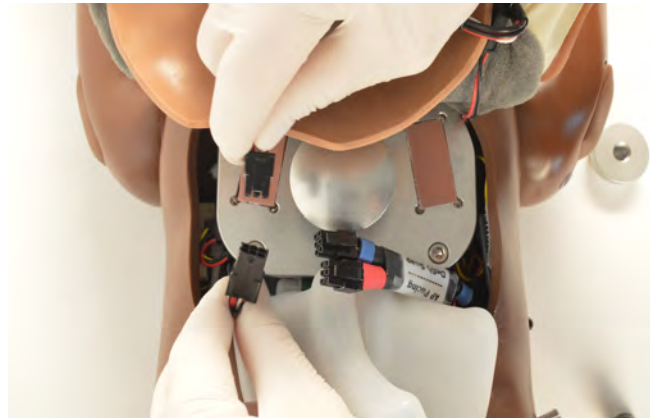


6. Tucked beneath the silicone lung bags and metal chest compression plate is the defibrillator harness. Gently pull out this harness. Be sure not to pull roughly so as to not damage the silicone lung bags or any other components in the simulator.



7. Take hold of the cable that is connected to the chest skin and disconnect the cable at its black connector by pressing on the clip.

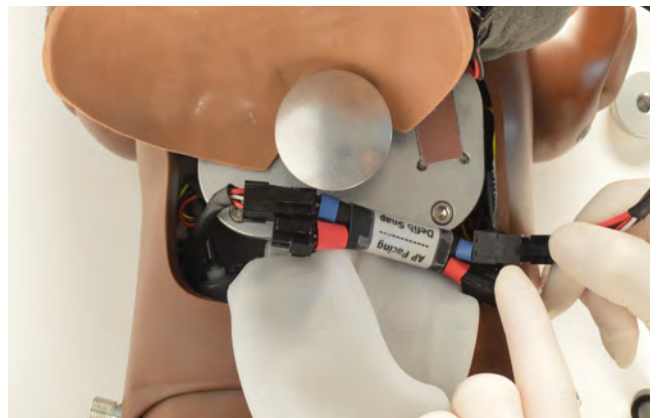




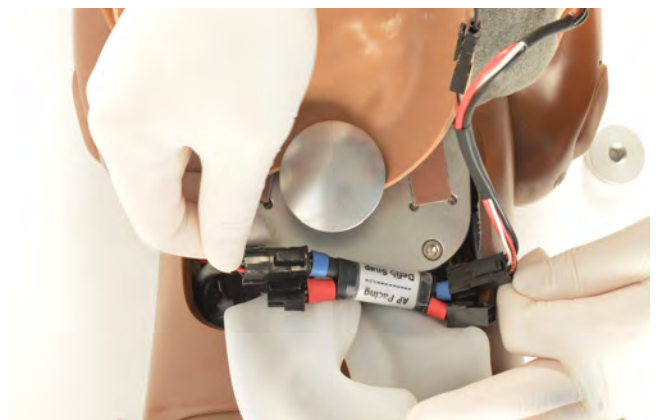
8. Connect the ends of the chest cable to the ends of the blue "Defib Snap" connector on the defibrillation harness.



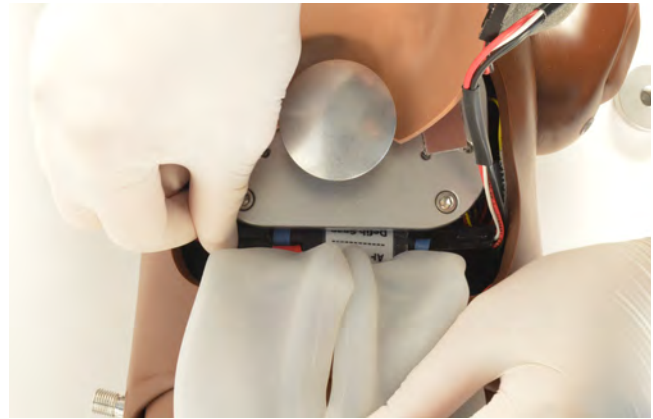
NOTE: The blue "Defib Snap" acts as an intermediary for the chest cable that was disconnected. Each end of the blue "Defib Snap" will be connected to the chest cable. These cables connect with only the correct side so there is no opportunity to improperly connect.



NOTE: Be sure that the connections are secure.



9. Tuck the defibrillator harness underneath the lungs and metal chest plate.



10. Place the silicone lungs bags back on top of the chest plate.



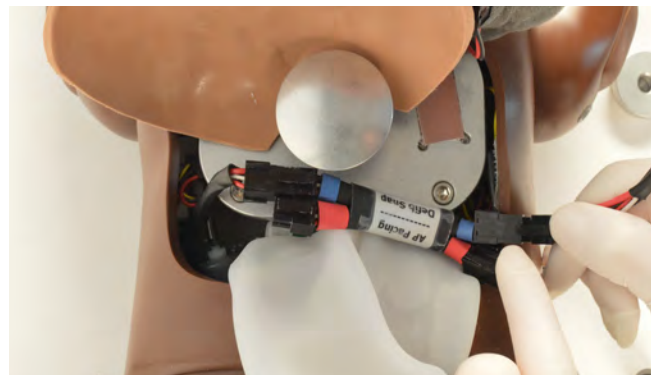
11. Finish reassembling the chest of the simulator.



## Disconnect Defib Snaps & Re-Enable Anterior Chest Patches

To re-enable the anterior gold patches on the chest skin and disable Defib Snaps:

1. Disconnect the BLUE harness.



2. Reconnect the two ends of the cable for the chest skin's anterior gold patches.
3. Reassemble the simulator.

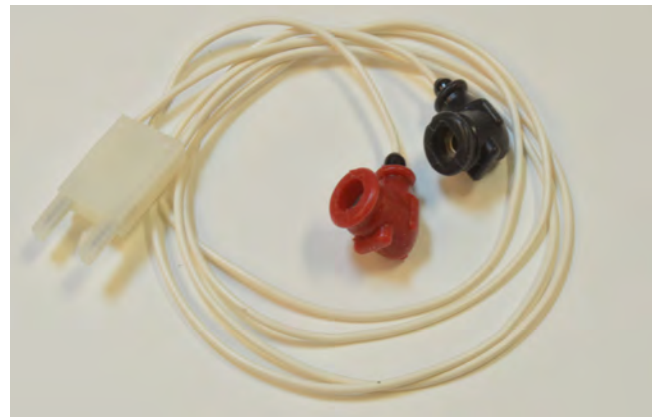


### Defibrillation Snap Adapter Cable

The "Snap Adapter Cable" connects to a real defibrillator and carries electrical therapy energy to the snap sites.

Gaumard manufactures a variety of modified snap adapter cables compatible with most electrical therapy devices (Zoll, Physio, etc.,). For more information about the snap adapter cables for a particular defibrillator, please contact Gaumard's Technical Support.

The snap adapter cable are color coded to identify the apex (red) and sternum (black) placement.



Snap Cable Adapter	Location
Red Connector	Apex Snap
Black Connector	Sternum Snap

**WARNING: The snap adapter cable carries real energy. Handle the snap adapter cable with the same care and precautions used with real pads, patches, and defibrillator manufacturer directions. Do NOT apply electrical therapy or deliver a shock while holding the snap connectors or while the snap connectors are disconnected from the simulator. Only deliver electrical therapy when the simulator is fully assembled, dry, and undamaged. Do NOT use damaged snap adapter cables, connectors, or medical equipment.**

To use the Snap Cable Adapter:

1. After adjusting the internal defibrillator harness connections, remove the black snap connector covers at the apex and sternum sites.



2. Connect the red snap connector to the apex site on the simulator.

**NOTE:** Be sure to push the adapter on to the defibrillation snap until there is a soft click that secures it to the snap.



3. Connect the black snap connector to the sternum site on the simulator.

**NOTE:** Be sure to push the adapter on to the defibrillation snap until there is a soft click that secures it to the snap.



4. Connect the "Snap Adapter Cable" to the appropriate defibrillator medical device.

The simulator is now ready for defibrillator exercises using the defibrillation snap sites!



## Detaching the Snap Adapter Cable

Once done running defibrillation exercises with the simulator, to detach the defibrillation snap adapter cable:

1. At the apex (left lateral side) location on the simulator, press down on the top latch of the snap adapter to remove it.

**NOTE:** There is a slight bump atop of the adapter. This is the latch to push down on to disengage it from the defibrillation snap.



- At the sternum (right shoulder) location on the simulator, press down on the top of the latch of the snap adapter to remove it.

**NOTE:** There is a slight bump atop of the adapter. This is the latch to push down on to disengage it from the defibrillation snap.



## 5.4 ANTERIOR-POSTERIOR (AP) PACING

The Anterior-Posterior (AP) defibrillation patches allow providers to deliver electrical therapy at the anterior (sternum patch) and posterior (back of the simulator) sites with the use of real defibrillation patches.

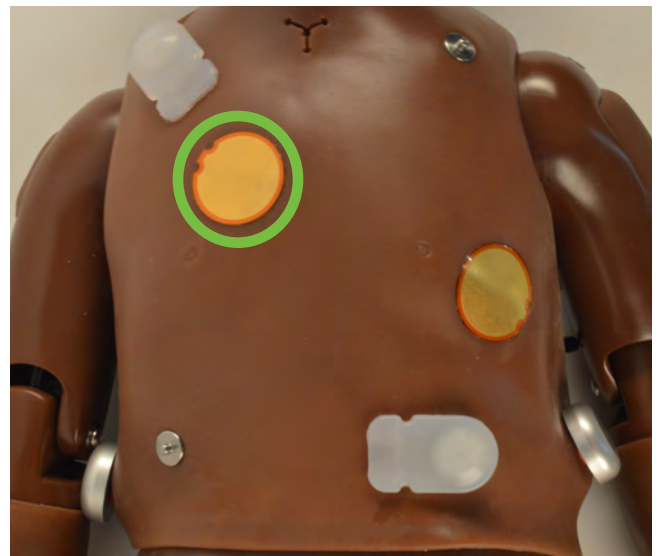
The anterior-posterior sites provide the same electrical therapy functionality as the sternum and apex patches (but at a different location).

The Anterior-Posterior Pacing option is only functional when the internal AP Pacing harness is connected.

It is recommended to adjust the internal connections as part of the simulation setup. This means prior to the start of your simulator determine the desired path to deliver energy and secure that connection.

When the internal connection is secured for the AP Pacing it will disable the chest skin apex large gold patch.

### Anterior (Sternum) Patch



### Posterior Patch



To adjust the internal defibrillation connections to enable the snap sites:

1. With the simulator turned OFF, unscrew the silver knobs on both sides of the torso.



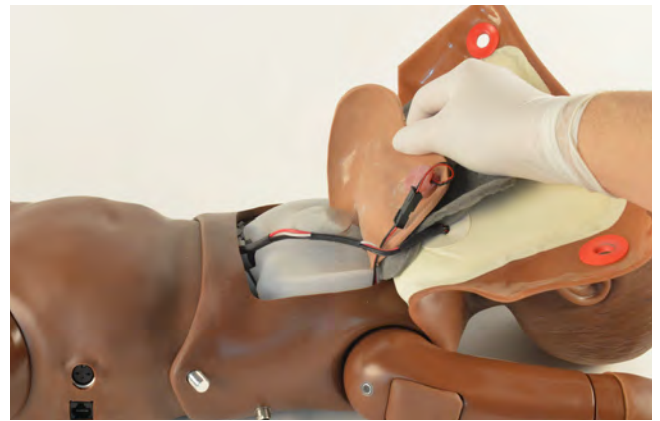
2. Gently lift the chest skin off of the silver rod.



3. Flip the chest over the face of the simulator. Notice the red and black wire attached to the chest skin. This is the cable used to connect the defibrillator options. Keep track of this cable.



4. Flip over the grey foam and ribcage of the simulator to move it out of the way while you work.



5. Take notice of the two silicone lung bags and flip them over the torso of the simulator to keep them out of the way.



6. Tucked beneath the silicone lung bags and metal chest compression plate is the defibrillator harness. Gently pull out this harness. Be sure not to pull roughly so as to not damage the silicone lung bags or any other components in the simulator.



7. Take hold of the cable that is connected to the chest skin and disconnect the cable at its black connector by pressing on the clip.



NOTE: Press down on the clip of the black connector to disconnect.

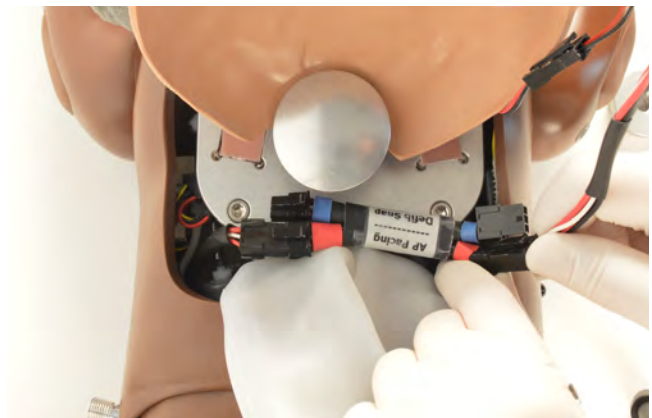


8. Connect the ends of the chest cable to the ends of the red "AP Pacing" connector on the defibrillation harness.

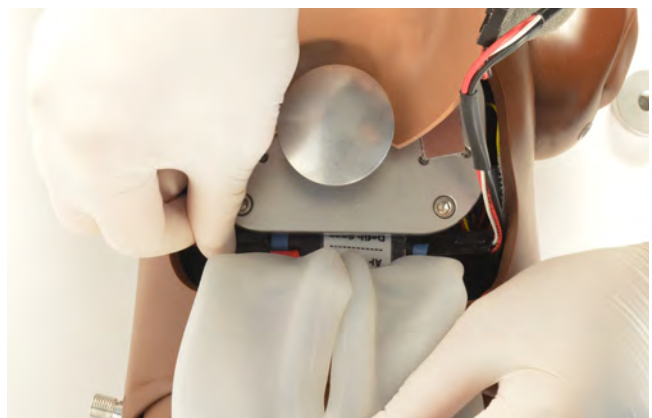
NOTE: The red "AP Pacing" acts as an intermediary for the chest cable that was disconnected. Each end of the red "AP Pacing" will be connected to the chest cable. These cables connect with only the correct side so there is no opportunity to improperly connect.



NOTE: Be sure that the red "AP Pacing" is connected on both ends to the chest cable.



9. Tuck the defibrillator harness underneath the lungs and metal chest plate.



10. Place the silicone lungs bags back on top of the chest plate.



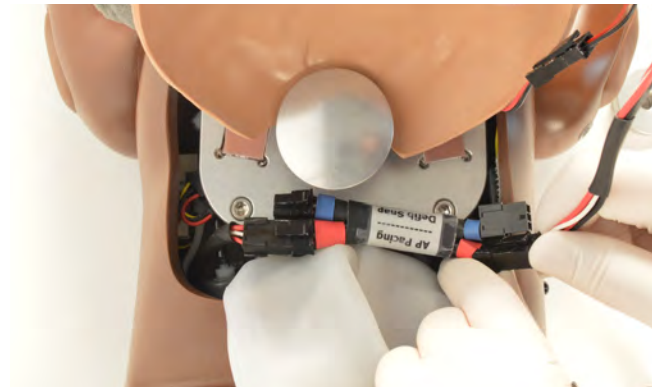
11. Finish reassembling the chest of the simulator.



### Disconnect AP Pacing & Re-Enable Anterior Chest Patches

To re-enable the anterior gold patches on the chest skin and disable AP pacing:

1. Disconnect the RED harness.



2. Reconnect the two ends of the cable for the chest skin's anterior gold patches.

3. Reassemble the simulator.



## 5.5 FINGER STICK BLEED

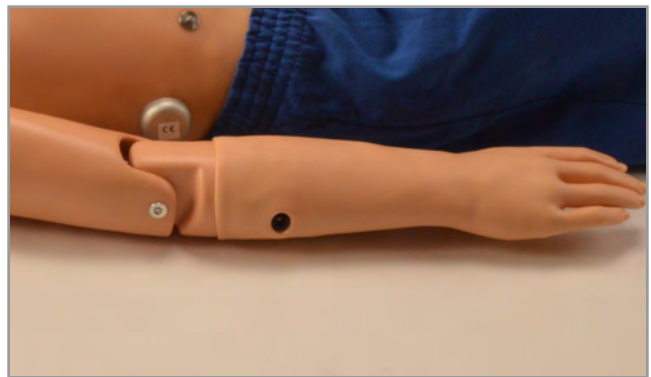
Pediatric HAL's right index finger can bleed real fluid through a precut opening on the fingertip. The feature allows participants to practice finger stick technique and collect simulated blood samples.

Feature	Capacity
Finger Stick	2 cc

**CAUTION: Use only Gaumard's provided simulated blood to fill the internal reservoirs. Any other simulated blood brand containing sugar or any additive may cause blockage and/or interruption of the vasculature system. Always flush internal fluids with clean water then air to prevent mold. Avoid overfilling the fluid reservoir. Doing so may result in a leak at the bleeding site.**

### Instructions for Use

1. Power the simulator ON and locate the black port on the simulator's right forearm



2. Fill the syringe with up to 2 CCs of fluid



3. Connect the syringe to the black port



4. Inject up to 2 CCs of fluid



5. Remove the fill syringe

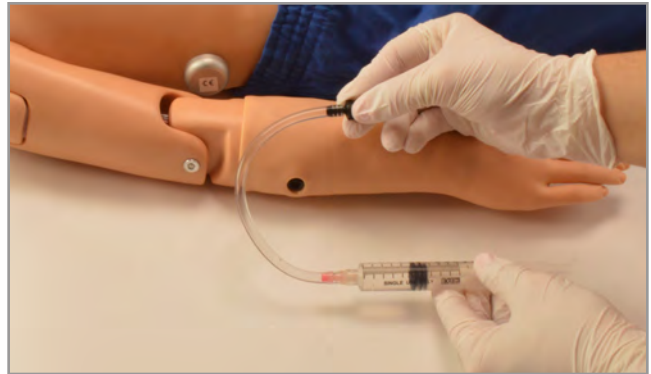


6. Enable the feature in the UNI software

CIRCULATION		+
Blood Pressure	100/70 mmHg	x
Korotkoff Sounds	Right: 2/Left: 2	x
Pulse		
Radial	Right: On/Left: On	x
Right Index Finger Bleed	On	x
Temperature	37.5 °C	x

### Draining the Finger Reservoir

1. Fill the syringe with a mixture of water and isopropyl alcohol.
2. Locate the black port on the right forearm of the simulator and connect the syringe to the black port
3. Inject 2CC of the water and isopropyl alcohol mix.
4. Enable the feature in the UNI software to allow the water and isopropyl alcohol mix to drain from the finger. Repeat these steps until the fluid is running clear.

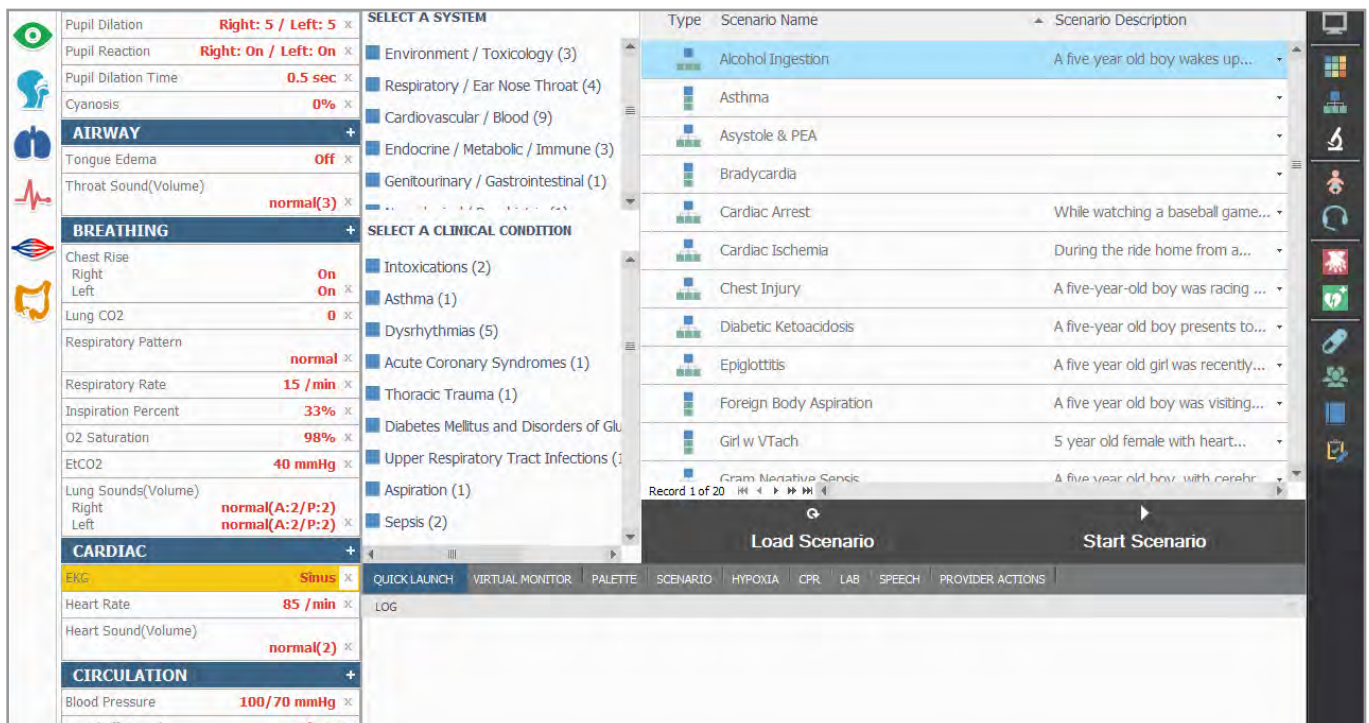


CIRCULATION		+
Blood Pressure	100/70 mmHg	x
Korotkoff Sounds	Right: 2/Left: 2	x
Pulse		
Radial	Right: On/Left: On	x
Right Index Finger Bleed	On	x
Temperature	37.5 °C	x

## 6. WORKING WITH UNI™

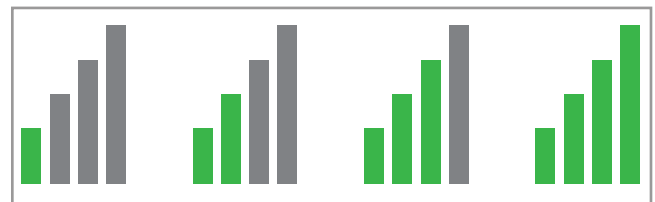
### 6.1 UNI™ INTERFACE

- The UNI software is used to control the simulator, monitor the vital signs, and evaluate the provider’s performance. The simulation technician or facilitator carrying out the simulation operates the UNI software.
- The UNI control elements and scenario programming procedures are consistent throughout the Gaumard family of high fidelity simulators. Some software controls and features covered in this guide may be hidden depending on the simulator’s hardware configuration and optional upgrade.



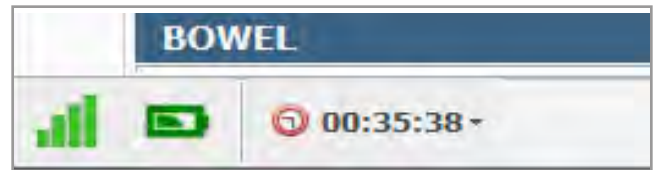
### Connection Status

The communication indicator displays the status of the radio link between the tablet’s USB RF module and the simulator. Full bars indicate excellent communication or normal operation.



### Pediatric HAL Battery Indicator

- The battery indicator is located on the lower left corner of the UNI software.
- A question mark appears for the battery indicator when there is no communication with the simulator and software and the battery information cannot be retrieved.
- The battery status indicator changes as the battery in the simulator is used.
- When the battery is depleted, the simulator is set to STAND-BY mode automatically to protect the simulator’s internal components. The simulator will not initialize until it has been recharged.
- Before the simulator shuts off due to a depleted battery, a message will pop up on the screen to notify the user of the low battery.

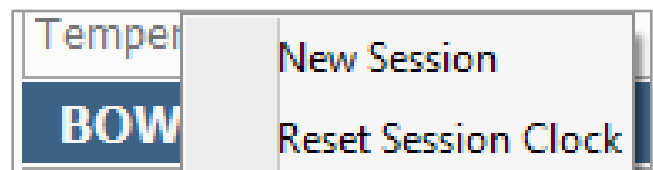


### Session Clock

The session timer allows the facilitator to maintain a chronological record of individual simulation sessions. The session timer can be reset from the file menu when a new simulation session begins. Events during the simulation are logged in accordance to the session time.

### Reset or Start a New Session

1. Click the time in the lower left corner of the UNI software, next to the clock icon, to activate the selection menu.
2. Select the option to either Reset Session Clock or to start a New Session.



## Power/Stand-by Button

The standby button is located on the bottom right corner of the UNI software. Use the stand-by feature to conserve battery.



## Quick Launch

The UNI interface opens to the quick launch page listing the scenarios. This page is used to easily access the preprogrammed scenarios saved on each profile.

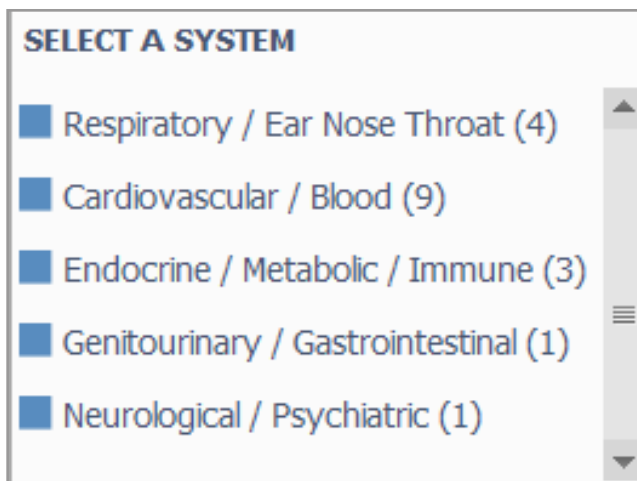
SELECT A SYSTEM		Type	Scenario Name	Scenario Description
<input checked="" type="checkbox"/> Environment / Toxicology (3)			Alcohol Ingestion	A five year old boy wakes up...
<input checked="" type="checkbox"/> Respiratory / Ear Nose Throat (4)			Asthma	
<input checked="" type="checkbox"/> Cardiovascular / Blood (9)			Asystole & PEA	
<input checked="" type="checkbox"/> Endocrine / Metabolic / Immune (3)			Bradycardia	
<input checked="" type="checkbox"/> Genitourinary / Gastrointestinal (1)			Cardiac Arrest	While watching a baseball game...
SELECT A CLINICAL CONDITION				
<input checked="" type="checkbox"/> Intoxications (2)			Cardiac Ischemia	During the ride home from a...
<input checked="" type="checkbox"/> Asthma (1)			Chest Injury	A five-year-old boy was racing ...
<input checked="" type="checkbox"/> Dysrhythmias (5)			Diabetic Ketoacidosis	A five-year old boy presents to...
<input checked="" type="checkbox"/> Acute Coronary Syndromes (1)			Epiglottitis	A five year old girl was recently...
<input checked="" type="checkbox"/> Thoracic Trauma (1)			Foreign Body Aspiration	A five year old boy was visiting...
<input checked="" type="checkbox"/> Diabetes Mellitus and Disorders of Glu			Girl w VTach	5 year old female with heart...
<input checked="" type="checkbox"/> Upper Respiratory Tract Infections (1)			Gram Negative Sepsis	A five year old boy with cerebr...

### Select A System

The scenarios are categorized by physiological systems to the left of the Quick Launch page; i.e. respiratory, cardiovascular, etc.

### Clinical Condition

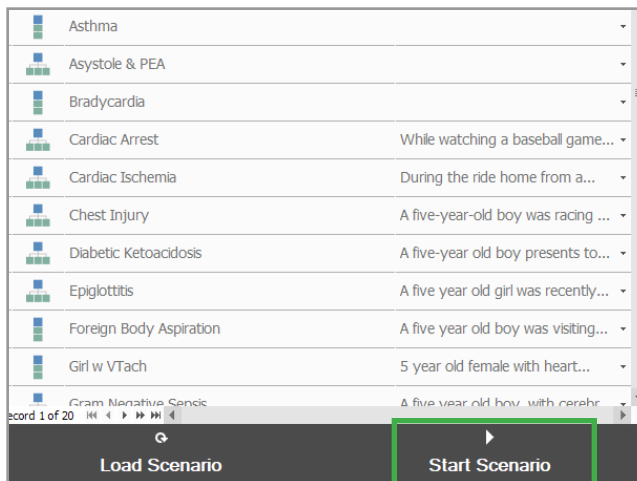
The scenarios may be categorized by clinical conditions on the left of the Quick Launch page; i.e. asthma, intoxication, etc.



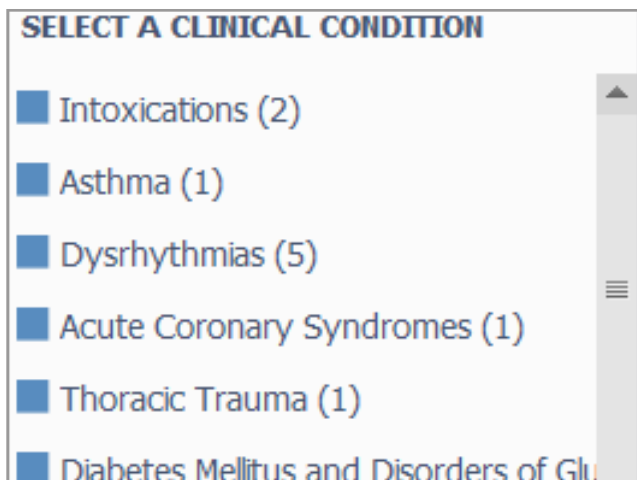
### Selecting a Scenario

1. Click on one of the scenarios listed to highlight it then click Start Scenario or Load Scenario.

Clicking Start Scenario loads the desired scenario and starts running it without any further intervention through software.



2. Click on the drop down arrow to the right to read a scenario description.



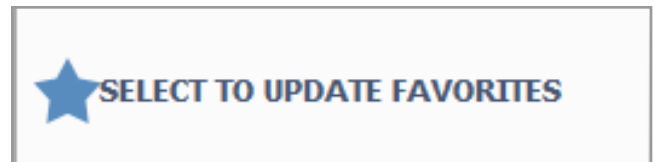
## Favorites

There is also a Favorites feature added to the quick launch program.

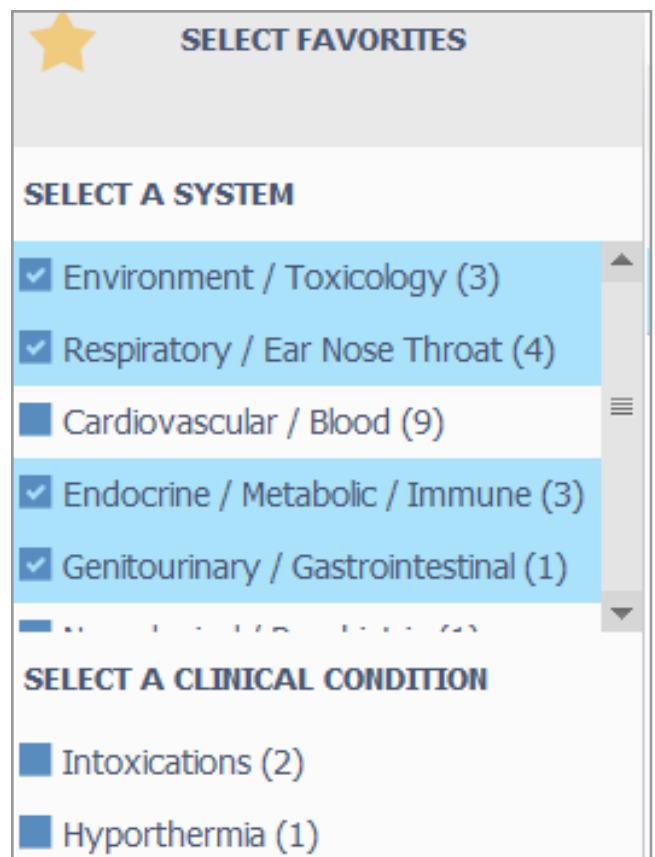
This feature allows users to reduce the number of scenarios highlighted to those within the categories that will be used most frequently.

### Enabling the Favorites Feature

1. Click the star icon.



2. Select the desired categories or scenario types. Once the category or scenario is selected, it will appear highlighted with a check in the box to the left of the title.



## Status/Details Controls

- The Status/Details tab displays the vital signs controls in a list format.
- The Status/Details panel is used to monitor and control the simulator's vital signs. The individual controls displayed on the details tab provide the simplest method for controlling the simulator's vital signs, sounds, and features.

### Systems List View

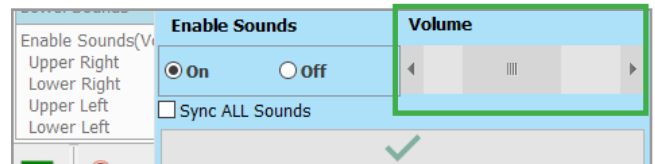
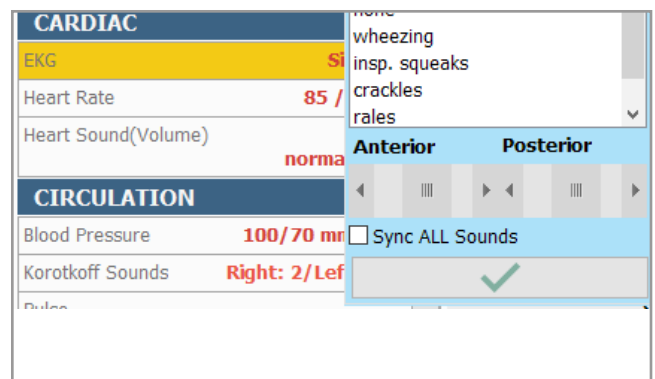
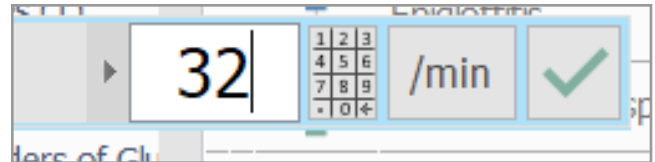
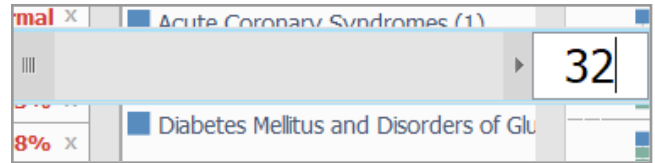
The vital signs controls are divided into separate categories:

- Cephalic
- Airway
- Breathing
- Cardiac
- Circulation
- Bowel

<b>CEPHALIC</b>		+
Intracranial Pressure	<b>7.5 mmHg</b>	x
Seizure	<b>none</b>	x
Blink State	<b>5 blinks/min</b>	x
Pupil Dilation	<b>Right: 5 / Left: 5</b>	x
Pupil Reaction	<b>Right: On / Left: On</b>	x
Pupil Dilation Time	<b>0.5 sec</b>	x
Cyanosis	<b>0%</b>	x
<b>AIRWAY</b>		+
Tongue Edema	<b>Off</b>	x
Throat Sound(Volume)	<b>normal(3)</b>	x
<b>BREATHING</b>		+
Chest Rise		
Right	<b>On</b>	
Left	<b>On</b>	x
Lung CO2	<b>0</b>	x
Respiratory Pattern	<b>normal</b>	x
Respiratory Rate	<b>15 / min</b>	x
Inspiration Percent	<b>33%</b>	x
O2 Saturation	<b>98%</b>	x
EtCO2	<b>40 mmHg</b>	x
Lung Sounds(Volume)		
Right	<b>normal(A:2/P:2)</b>	
Left	<b>normal(A:2/P:2)</b>	x
<b>CARDIAC</b>		+
EKG	<b>Sinus</b>	x
Heart Rate	<b>86 / min</b>	x
Heart Sound(Volume)	<b>normal(2)</b>	x
<b>CIRCULATION</b>		+
Blood Pressure	<b>101/71 mmHg</b>	x

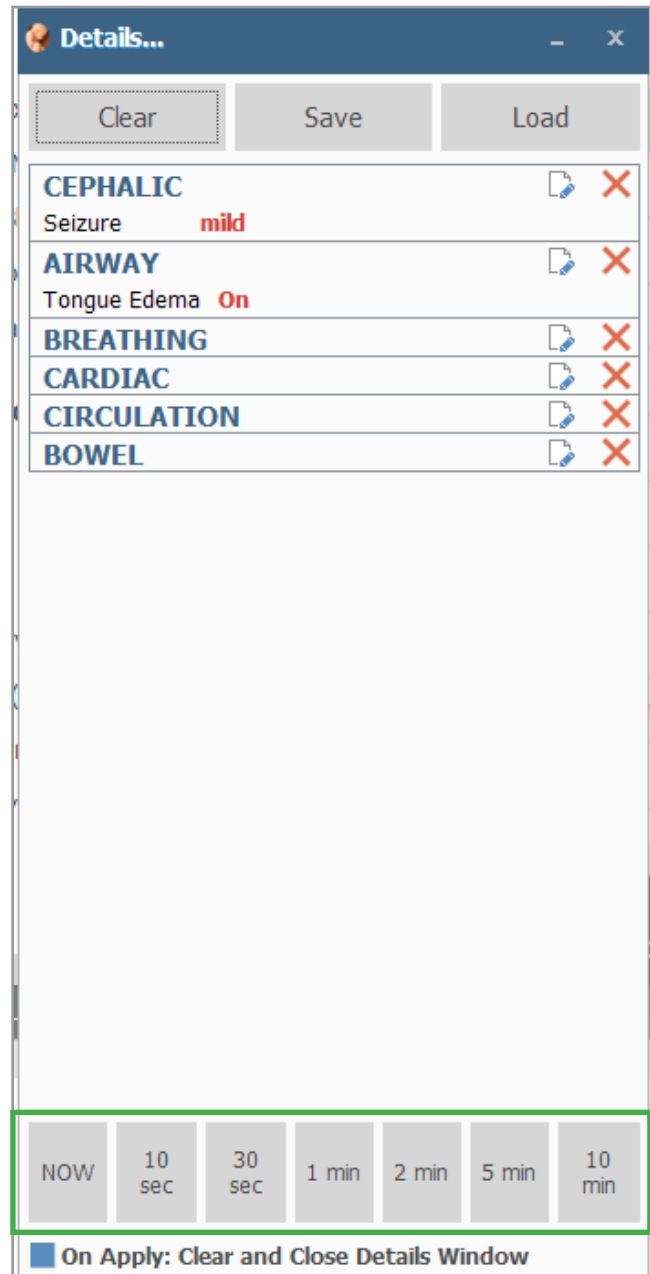
## Changing Vital Signs

1. To adjust numerical values. (e.g. heart rate, blood pressure, respiratory rate, etc.) click and drag the slider control
2. You may also use the keyboard for manual entry and click the green check mark to confirm the change.
3. To change patterns, sounds, and rhythms, click on the specific control to display the library (e.g. EKG rhythms, heart and lung sounds, respiratory patterns, etc.)
4. Click the slider control below the sound library to adjust the volume of the sounds.



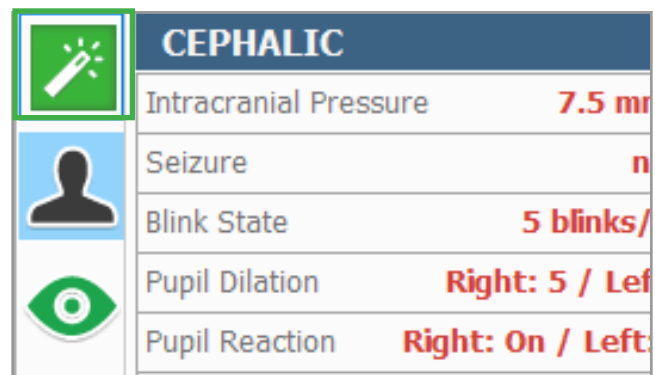
## Applying Changes

- No changes will be made to the simulator's condition until the new settings are submitted using the Apply panel.
- After the list of changes is created, click NOW to update the vital signs instantly.
- You may also click a trending time to update numerical vital sign parameters (e.g. heart rate, blood pressure) gradually.



- Enable the Instant Apply option by clicking the wand to change the vital sign to a new value without the need of using the Apply panel.

**NOTE:** Vital signs undergoing change blink yellow.



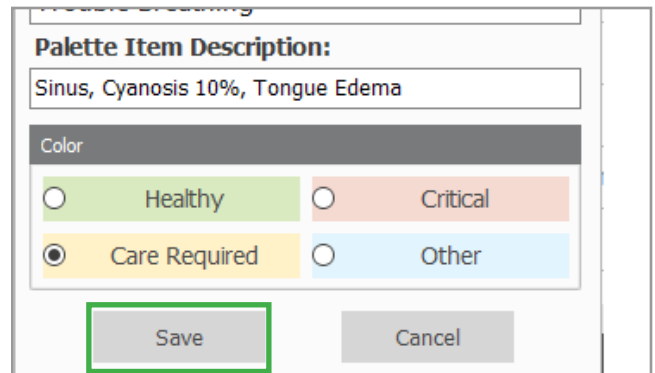
## Creating Palette Items

A palette item stores one or more vital sign settings into a single loadable object. Use a palette item to update a set of vital signs quickly. For example, one palette item can be created to update all the cardiac parameters to a healthy state.

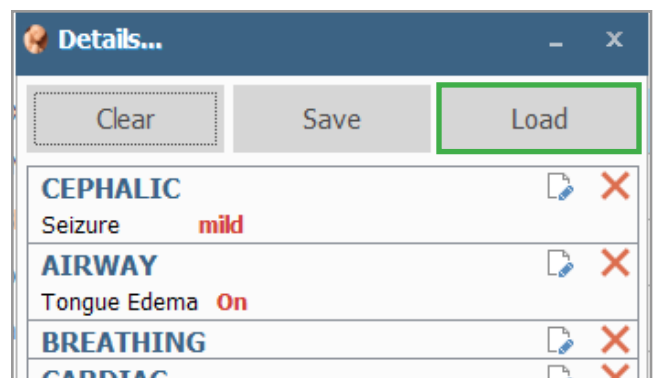
1. To create a new palette item, set the values for the desired vital signs parameters using the Details control panel and click Save.



2. Enter a name for the palette, a description, and choose a color code, and click Save to create the new palette item. Palette items are stored in the active profile library.



3. When the palette is needed, click the Load button to select the palette from the library.



## 6.2 HYPOXIA MODELING PEDIATRIC S3004 & S3005

Use the Hypoxia tab to evaluate the effectiveness of provider interventions on an apneic patient. The model adjusts cardiac, oxygen saturation, and cyanosis dynamically in response to effective ventilations. The model also responds to the administration of virtual drugs.

The screenshot displays the 'HYPOXIA' model interface. It is divided into three main sections:

- Hypoxia Model State:** Contains three radio buttons: 'PAUSE hypoxia modeling' (checked), 'IMPROVE (adequate oxygen perfusion / breathing)', and 'DETERIORATE (compromised oxygen perfusion / apnea)'. Below these is a horizontal bar with a color gradient from red to purple, and three buttons labeled 'Healthy', 'Mild Cyanosis', and 'Severe Cyanosis'.
- Modeled Therapy:** Includes sliders for 'Improve Gain' and 'Oxygen: 0 L/min'. It also features input fields for 'Epinephrine' (0.04 mg), 'Dose onboard' (0 mg/kg), and 'Model Rate' (1 x), with an 'Add' button and a 'Reset' button.
- Ventilation Monitor:** Shows 'Effective Ventilation Rate' with a slider between 'Min 10' and 'Max 25'. A red warning text reads 'VENTILATION RATE LOW (Approx - 0)'. Below this is a large green rectangular area representing a data plot.

At the bottom, a navigation bar includes tabs for 'QUICK LAUNCH', 'VIRTUAL MONITOR', 'PALETTE', 'SCENARIO', 'HYPOXIA', 'CPR', 'LAB', 'SPEECH', and 'PROVIDER ACTIONS'.

### Hypoxia Model State

The hypoxia model options improve or deteriorate the cardiac and respiratory vital signs gradually.

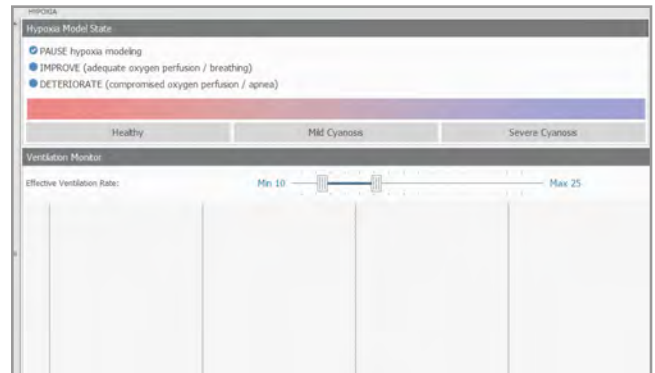
- Pause: Model will pause at the current state
- Improve: Trend the vital signs to a healthy state
- Deteriorate: Trend the vital signs to a severe cyanotic state. Ventilations are detected when the respiratory rate is at zero.

This close-up shows the 'Hypoxia Model State' controls. It features three radio buttons: 'PAUSE hypoxia modeling' (checked), 'IMPROVE (adequate oxygen perfusion / breathing)', and 'DETERIORATE (compromised oxygen perfusion / apnea)'. Below these is a horizontal bar with a color gradient from red to purple, and three buttons labeled 'Healthy', 'Mild Cyanosis', and 'Severe Cyanosis'.

## Cyanosis Levels

Select the cyanosis level to move to any of the following states immediately:

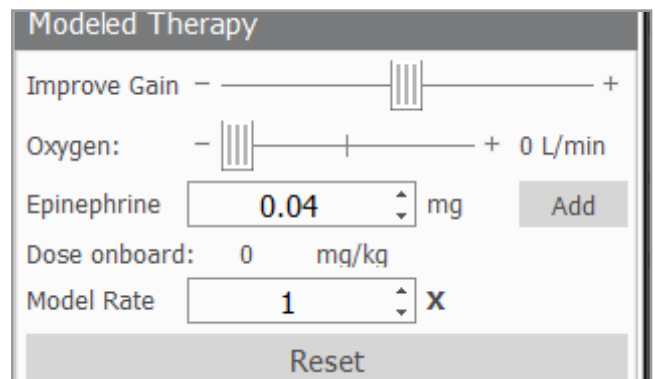
- Healthy: Pediatric is pink with adequate oxygenation
- Mild Cyanosis: Pediatric is slightly blue and the vital signs are starting to deteriorate.
- Severe Cyanosis: Pediatric is blue, apneic, and vital signs are rapidly worsening.



## Modeled Therapy

The modeled therapy menu provides additional intervention options:

- Improve Gain: Adjust the slider to increase or decrease the cyanotic response to ventilations
- Oxygen: Adjust the slider to administer oxygen to the pediatric in liters per minute
- Epinephrine: Administer epinephrine to the model. Set the epinephrine dose and then click "Add". Administering epinephrine increases the heart rate.
- Reset: Click Reset to clear the oxygen flow and the epinephrine dose onboard.



## 6.3 SOFTWARE OPTIONS

### Automatic Mode

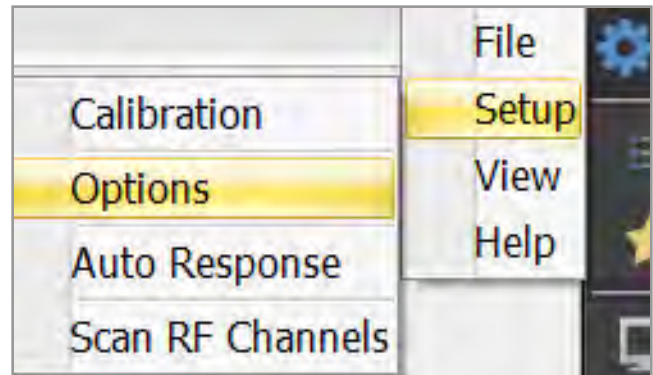
The Automatic Mode assists the facilitator by automatically adjusting vital signs in response to the provider's participation, pharmacologic intervention, and manual input. For example, when the facilitator increases the heart rate, the Automatic Mode will calculate the response and adjust the blood pressure automatically.

The Automatic Mode includes the following built - in profiles:

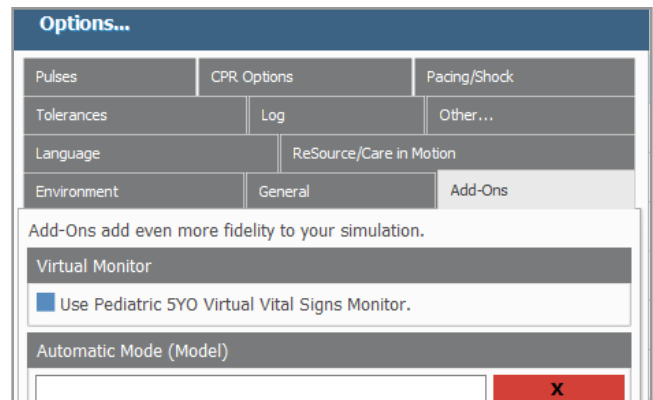
- Default Modeling: Includes one palette with healthy vital signs
- Meds Profile: This profile includes a virtual library of pre-programmed drugs to be used on simulations
- Quick Start Pediatric HAL Modeling: includes a library of scenarios configured for the Automatic Mode.

### Activate Automatic Mode

1. Click the gear icon in the upper right hand corner of the UNI software then -> Setup -> Options.

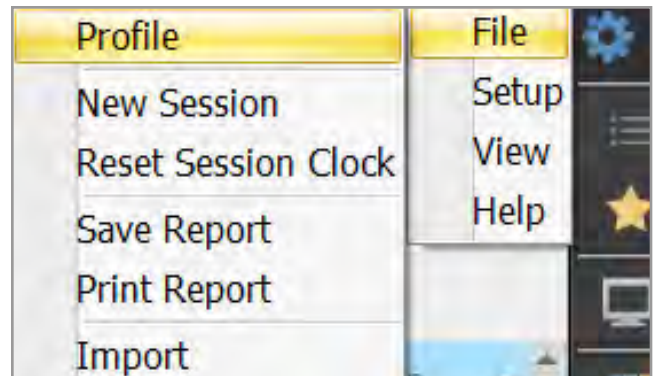


2. Select the Add-Ons tab and input the Automatic Mode activation code, then click OK.

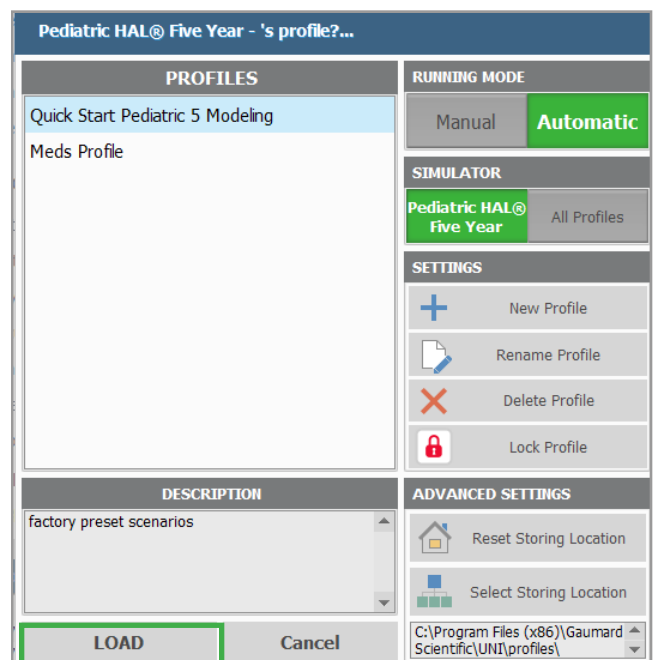


## Switching to Automatic Mode

1. Click the gear icon in the upper right hand corner of the UNI software, then File ->Profile.



2. Under Running Mode select Automatic and click Load.



## Streaming Audio

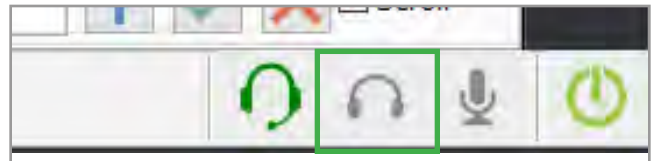
Ensure that the headset and microphone is connected to the PC before starting the UNI software. The headset minimizes echo and environmental noise to improve audio quality.



## Activate Streaming Audio

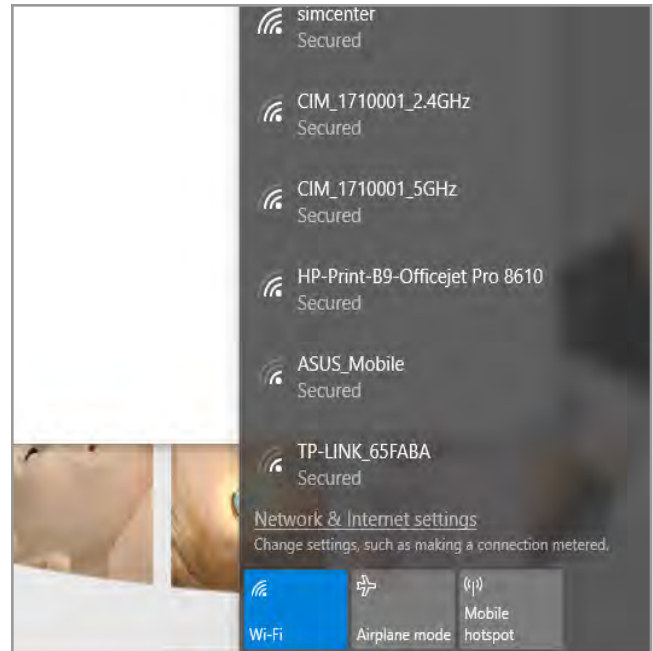
- Select the duplex streaming audio icon located on the bottom right of the UNI software to activate the simultaneous listening and speaking option.
- To only activate the audio/speaking option select the microphone icon.
- To only activate the listening option, select the headphones icon.

**NOTE:** The selected icon will turn green.



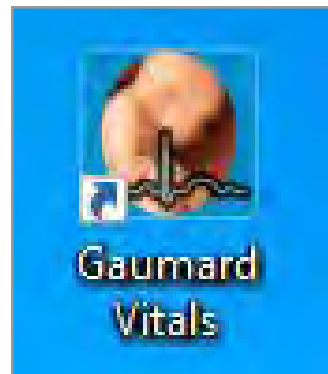
## Virtual Monitor

- The control PC and the all-in-one virtual monitor PC automatically establish a wireless link at startup. The wireless connection allows the Gaumard control software to transmit the vital signs information to the Gaumard Vitals software.
- To verify the wireless link between the two computers, click the Wi-Fi icon. The wireless network name is configured at the factory and may differ from the one seen here.
- Be sure both the control computer that runs UNI and the virtual monitor that runs Gaumard Vitals are connected to the same Wi-Fi network.

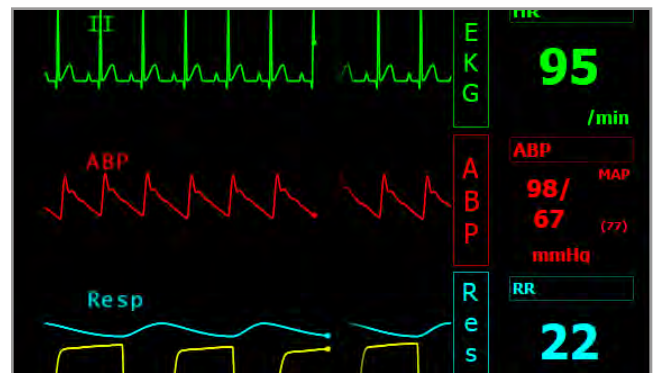


## Gaumard Vitals

- After the wireless connection is established, double click or tap the Gaumard Vitals icon to start the vital signs software.



- The Gaumard Vitals software is now ready to receive the vital signs information generated by the UNI control software.
- For more details on using the UNI software, see the UNI user guide



## 7. ROUTINE MAINTENANCE

### 7.1 CLEANING THE VEINS

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It is strongly recommended to clean and dry the forearm vasculature at the end of each simulation session to prevent mold or clogs.

1. To clean and dry the IV arm, fill the filling syringe with a mixture of water and isopropyl alcohol (70:30 ratio), and connect the fill syringe and the drain tube to the arm.



2. Push the water and isopropyl alcohol mixture until the fluid that exits the drain tube is clear.



3. Once the fluid runs clear, fill the syringe with air and push the air through the vasculature.

**NOTE:** Pushing air through the veins helps to remove any residual fluid and dries the vasculature.

4. Disconnect the drain tube and filling syringe.



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**WARNING: Do not store the simulator with fluids in the veins. Doing so may lead to molding and may damage the internal electronics.**

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## 7.2 BATTERY ETIQUETTE

The battery is an integral part of your simulator and requires appropriate care to maintain efficiency and longevity.

Overcharging or leaving the battery idle for long periods of time will damage the battery and lower the amount of potential charge.

To ensure maximum battery life, cycle the battery and avoid overcharging by adhering to the following warnings and guidelines.

### Avoid Overcharging the Battery

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**WARNING: Do NOT leave the simulator charging continuously for extended periods of time (i.e., several days). The battery may attempt to hold more charge than it is supposed to thus damaging the battery.**

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- It is recommended to charge the simulator the day or night before a simulation to allow the battery time to fully charge.
- Unplug the simulator when in use unless while running a simulation the UNI software indicates a critically low battery. In these cases, it is advisable to plug in the simulator's battery charger to finish the simulation. Once the simulation is completed, turn the simulator off and allow the simulator's battery to charge.

### Avoid Battery Idleness

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**WARNING: Do NOT leave the simulator idle for extended periods of time (i.e., months, years). The battery's capacity for charge will deteriorate if there is no cycling in the level of charge.**

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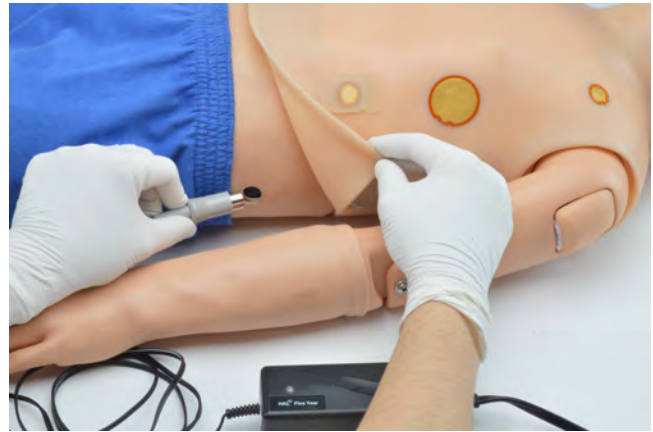
- If you plan to store away and not use the simulator for an extended period of time, it is recommended to fully charge the battery before storage. As part of routine maintenance, plan a time each month to cycle the battery and fully charge it before storing the simulator away again.

### Cycling the Battery

1. Obtain the correct battery charger for the simulator and plug the wall adapter end into a voltage source.



2. With the simulator turned off, plug the charger into the charging port on the simulator.



3. Leave the simulator plugged into the charger until the LED light on the charger transitions to a green light.



4. Disconnect the simulator from the charger.



- 5. The simulator is ready to be used for simulation.
- 6. Use the simulator's battery charge until depleted.
- 7. Repeat this process as needed.

**NOTE:** If preparing the simulator for storage, arrange for a time every month to "cycle the battery" of the simulator. Then store the simulator with a fully charged battery until the next scheduled usage.

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**WARNING: Never store your simulator with a depleted battery for an extended period.**

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## 78. TROUBLESHOOTING

### 8.1 CONNECTIVITY

Review the UNI user guide for the most common troubleshooting topics regarding the UNI software.

Probable Cause	Solution
Battery indicator question mark	Disconnect and reconnect battery charger and allow the simulator to charge fully (an indicator light will turn green when finished charging).
Virtual monitor not connecting	Check that both computers/tablets are connected to the same Wi-Fi network, check that firewalls are turned off on both computers/tablets, check that the IP & Port numbers match from the UNI software on the Gaumard Monitors.
BP Cuff reading not accurate	Recalibrate through the UNI software by clicking the blue gear icon in the upper right hand corner -> setup-> calibration.

### 8.2 CO<sub>2</sub> NOT DETECTED

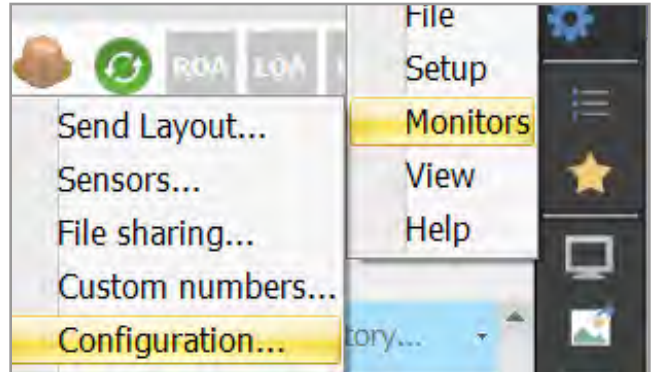
Probable Cause	Solution
CO <sub>2</sub> tubing is not connected properly	Check the equipment set up and the cartridge's connection to the simulator, and adjust Lung CO <sub>2</sub> level in the UNI software.

### 8.3 TROUBLESHOOTING VIRTUAL MONITOR CONNECTIVITY

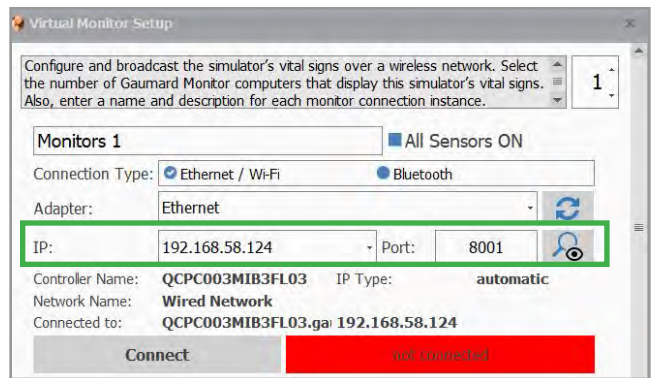
If you are experiencing difficulty establishing connection between the Gaumard Vitals software and the UNI software to control and display vital signs, consider checking the IP address for the software.

#### Checking the IP address

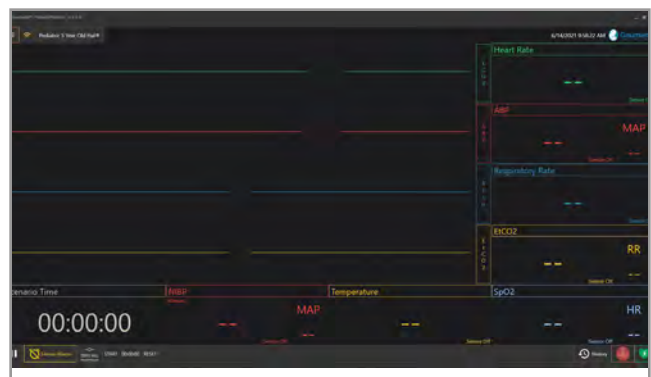
1. Open and load UNI on the control PC, then click the gear icon in the upper right corner of the software then Monitor -> Configuration.



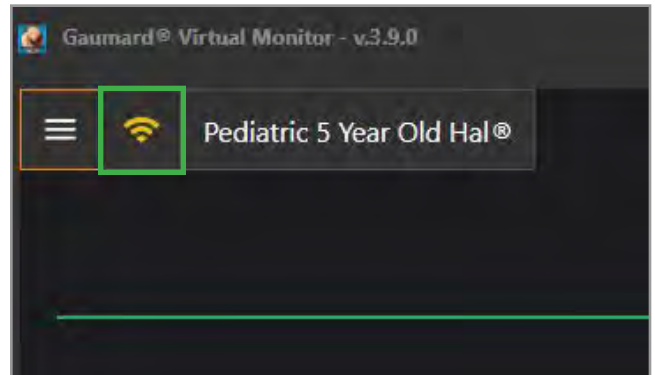
2. This will open the Virtual Monitor Setup box. Make note of the IP address and port number.



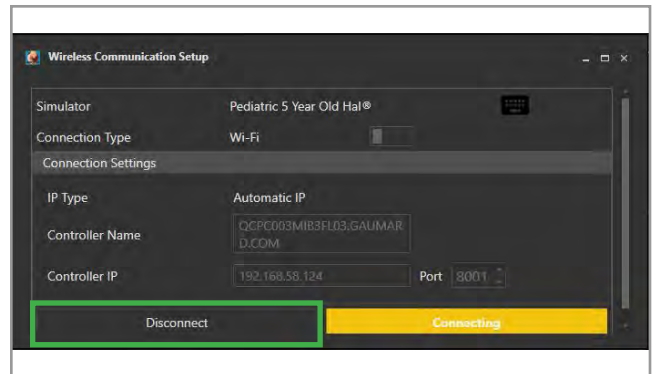
3. Open the Gaumard Vitals software on the All-In-One computer.



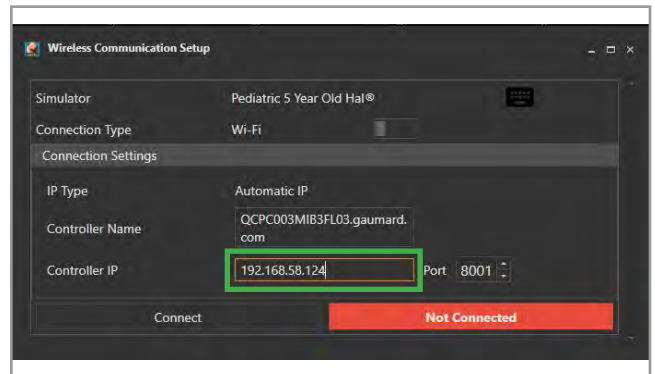
4. In the upper left hand corner, click the signal icon.



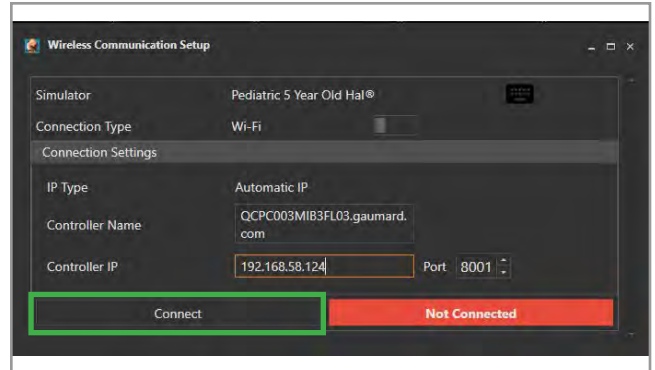
5. The Wireless Communication Setup pop-up window will appear. Click "Disconnect".



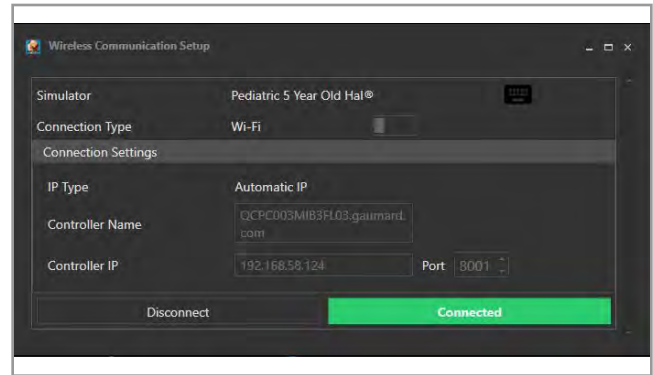
6. Enter the IP address and port number from the control computer (See step 2).



7. Click Connect.



NOTE: The Wireless Communication Setup will update to display a green "Connected" status.



NOTE: The main Gaumard Vitals software will now display the connected vitals and waveforms.



## 9. APPENDIX

### 9.1 SPARE PARTS LIST

#### S3005 Pediatric HAL 5 Year

S3005 Part ID	Name	Description
S3005.010	Battery	Rechargeable battery
S3005.023L	Lower Left Arm	Lower Left Arm consumable
S3005.023R	Lower Right Arm	Lower Right Arm consumable
S3005.029R	I/O Leg Skin Cover	Skin cover for right leg tibia bone
S3005.031	I/O Tibia Bones	I/O leg tibia reservoir bones
S3005.043	Intramuscular thigh Injection Site	Intramuscular Thigh Injection site
S3005.080	Artificial Blood Concentrate	Simulated blood
S3005.181	Mineral oil	Oil-based mineral lubricant
S3005.082	Trachea Tape	Trachea tape (pink)

#### S3004 Pediatric HAL 1 Year

S3004 Part ID	Name	Description
S3004.010	Battery	Rechargeable battery
S3004.023L	Lower Left Arm	Lower Left Arm
S3004.023R	Lower Right Arm	Lower Right Arm
S3004.029R	I/O Leg Skin Cover	Skin cover for right leg tibia bone
S3004.031	I/O Tibia Bones	I/O leg tibia reservoir bones
S3004.043	Intramuscular Thigh Injection Site	Intramuscular Thigh injection site replacement
S3004.053R	Intramuscular Arm Injection Site	Intramuscular Arm Injection site replacement
S3004.181	Mineral oil	Oil-based mineral lubricant
S3004.082	Trachea Tape	Trachea tape for trachea maintenance

## 9.2 EXCLUSIVE ONE-YEAR LIMITED WARRANTY

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Gaumard warrants that if the accompanying Gaumard product proves to be defective in material or workmanship within one year from the date on which the product is shipped from Gaumard to the customer, Gaumard will, at Gaumard's option, repair or replace the Gaumard product.

This limited warranty covers all defects in material and workmanship in the Gaumard product, except:

- » Damage resulting from accident, misuse, abuse, neglect, or unintended use of the Gaumard product;
- » Damage resulting from failure to properly maintain the Gaumard product in accordance with Gaumard product instructions, including failure to properly clean the Gaumard product;
- » Damage resulting from a repair or attempted repair of the Gaumard product by anyone other than Gaumard or a Gaumard representative.

This one-year limited warranty is the sole and exclusive warranty provided by Gaumard for the accompanying Gaumard product, and Gaumard hereby explicitly disclaims the implied warranties of merchantability, satisfactory quality, and fitness for a particular purpose. Except for the limited obligations specifically set forth in this one-year limited warranty, Gaumard will not be liable for any direct, indirect, special, incidental, or consequential damages, whether based on contract, tort, or any other legal theory regardless of whether Gaumard has been advised of the possibilities of such damages. Some jurisdictions do not allow disclaimers of implied warranties or the exclusion or limitation of consequential damages, so the above disclaimers and exclusions may not apply and the first purchaser may have other legal rights.

This limited warranty applies only to the first purchaser of the product and is not transferable. Any subsequent purchasers or users of the product acquire the product "as is" and this limited warranty does not apply.

This limited warranty applies only to the products manufactured and produced by Gaumard. This limited warranty does not apply to any products provided along with the Gaumard product that are manufactured by third parties. For example, third-party products such as computers (desktop, laptop, tablet, or handheld) and monitors (standard or touch-screen) are not covered by this limited warranty. However, third-party products are covered by the warranties provided by the respective third-party manufacturers and such warranties are transferred from Gaumard to purchaser upon purchase of the Gaumard product. Defects in third-party products are covered exclusively by the warranties provided by the third-parties. Gaumard does not provide any warranty, express or implied, with respect to any third-party products. Please contact the third-party manufacturer for information regarding the availability of extended warranties for third-party products.

Any waiver or amendment of this warranty must be in writing and signed by an officer of Gaumard.

- » In the event of a perceived defect in material or workmanship of the Gaumard product, the first purchaser must:
- » Contact Gaumard and request authorization to return the Gaumard product. Do NOT return the Gaumard product to Gaumard without prior authorization.
- » Upon receiving authorization from Gaumard, send the Gaumard product along with copies of (1) the original bill of sale or receipt and (2) this limited warranty document to Gaumard at 14700 SW 136 Street, Miami, FL, 33196-5691 USA.

If the necessary repairs to the Gaumard product are covered by this limited warranty, then the first purchaser will pay only the incidental expenses associated with the repair, including any shipping, handling, and related costs for sending the product to Gaumard and for sending the product back to the first purchaser. However, if the repairs are not covered by this limited warranty, then the first purchaser will be liable for all repair costs in addition to costs of shipping and handling.

## 9.3 EXTENDED WARRANTY

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In addition to the standard one year of coverage we offer a range of service plans through our Gaumard Cares program. For more information about Gaumard Cares service planes please contact customer service.

## 9.4 GAUMARD SALES TERMS AND CONDITIONS

These Gaumard Scientific Company, Inc. (“Gaumard”) Sales Terms and Conditions (“Terms”) apply to the sale or use of Gaumard equipment (“Equipment”), Software (“Software” as defined in paragraph 13), and supplies (“Supplies”), collectively referred to as “Product” or “Products” between Gaumard and the entity named on the applicable Gaumard Purchase Order (“Customer”) (collectively, “Party” or “Parties”). The Parties, intending to be legally bound, agree as follows.

1. **Agreement.** Customer agrees to purchase from Gaumard the Products set forth in quotes and purchase orders accepted by both Customer and Gaumard from time-to-time. These Terms, along with any Exhibits, any applicable Gaumard Purchase Order documents, Gaumard Warranty documents, Gaumard Cares Service Plan documents, and any other purchasing or service documents executed by the Parties constitute the complete and entire agreement between Gaumard and Customer (collectively referred to herein as the “Agreement”). This Agreement will supersede all other quotations, agreements, understandings, warranties, and representations (whether written or oral) between the Parties with respect to the subject matter set forth in the Agreement. Any Customer documentation (including Customer’s purchase order terms and conditions) that conflicts with or attempts to modify the Agreement in any way is hereby rejected and of no effect unless specifically agreed to in writing and signed by the Parties. No provision of this Agreement shall be waived, amended, modified, superseded, canceled, terminated, renewed, or extended except in a written document signed by both Parties or signed by the Party against whom the modification is sought to be enforced. This agreement can be terminated by Gaumard without cause by giving thirty (30) days prior written notice to Customer.

2. **Prices.** Prices, fees, and charges for Products and services (including maintenance, installation, and training as described in the applicable Gaumard Purchase Order documents, Gaumard Warranty documents, Gaumard Cares Service Plan documents) (“Service” or “Services”) are payable in United States (U.S.) Dollars only, and do not include any applicable taxes or shipping charges. If Customer claims any tax exemption, it must furnish a valid tax exemption certificate before shipment of Products. Unless such certificate is furnished, Customer agrees to pay at its sole expense all applicable taxes, assessments, fees, penalties, import duties, and merchandise processing fees that may be levied or assessed upon Customer or Gaumard with respect to this Agreement, the Products, or any interest thereon. Gaumard reserves the right to increase prices on thirty (30) days written notice to Customer.

3. **Payment.** Unless otherwise agreed to in writing by Gaumard, Customer shall pay invoices net twenty (20) days from the invoice date. A late charge will be due on any unpaid balance at a rate of 1.0% per month or the maximum rate otherwise permitted by law, whichever is lower. Gaumard may charge interest at the maximum rate permitted by law on all amounts not paid by the invoice due date. Gaumard retains a purchase money security interest in all Products sold to Customer to secure payment of the total purchase price thereof. Customer hereby grants Gaumard the right to file a copy of this Agreement with any appropriate authorities to evidence this security interest. Customer agrees to execute and deliver such other documents as Gaumard may request in connection therewith. Gaumard shall not be obligated to deliver any Product or perform any Service during any period when Customer payment is past due. Customer will be responsible for all costs (including reasonable attorneys’ fees) incurred by Gaumard to collect overdue payments and/or to take possession or otherwise dispose of Products for which payment is overdue.

4. **Product Shipment and Risk of Loss.** Unless otherwise agreed to in writing by Gaumard, all Products will be shipped F.O.B. Origin, regardless of any provisions for payments of freight, insurance, the form of shipping documents, or selection of carrier by Gaumard. F.O.B. Origin means title to the Products passes to the Customer at the shipping dock of Gaumard or Gaumard’s supplier or authorized agent. Customer is responsible for shipping charges and for the cost of insurance paid to cover any losses from Gaumard’s shipment point to Customer’s receipt. Gaumard will assist Customer in processing any loss claims. Gaumard shall use reasonable efforts to meet the specified delivery dates. If Gaumard fails to make delivery within a reasonable time for reasons other than Customer’s fault or circumstances beyond Gaumard’s reasonable control, then Customer’s only remedy is the right to terminate the applicable Purchase Order, whereupon Gaumard will refund any prepayments received from Customer relating to such Purchase Order.

5. **Installation and Acceptance.** Product orders are subject to 1) written acceptance by Gaumard, 2) receipt of specified deposits, as applicable and 3) continuing credit approval. If applicable, Gaumard will install Equipment at an agreed upon location (“Installation”). Installation shall be complete upon Gaumard’s demonstration that the Equipment meets Gaumard’s then-current operating specifications (“Installation”). Installation is subject to Customer cooperating in preparing and maintaining the site in compliance with Gaumard specifications, including but not limited to, applicable electrical and other connection regulations and all environmental conditions. If Customer fails to accept shipment of Products other than for breach of warranty, Customer shall immediately pay the full purchase price as if shipment and Installation had occurred. If Customer fails to accept Products and if Gaumard decides to store ordered Products, Customer shall be responsible for Gaumard’s reasonable insurance, handling, and storage charges. If Gaumard elects not to store ordered Products, Gaumard may arrange shipment and storage in a bonded warehouse at Customer’s sole risk and expense.

6. **Delay of Performance.** The Parties’ obligations under this Agreement are subject to force majeure, including but not limited to, civil insurrection, terrorism, fire, flood, labor disputes, shortages, delays of suppliers or contractors, or government priority systems, actions taken or threatened by any governmental agencies, acts of God or other contingencies or acts not within the sole control of the Parties. Gaumard reserves the right during any shortage period to (a) make Supplies available to Customer (as it sees fit) without any liability to Customer, and (b) to make substitutions and modifications in the specification of any Products, provided such substitutions or modifications do not materially affect the performance of Products.

7. **WARRANTIES.** Gaumard warrants that if a Product proves to be defective in material or workmanship within one year from the date on which title to the Product passes to the Customer (“Warranty Period”), Gaumard will, at Gaumard’s option, repair or replace the Gaumard product. This limited warranty covers all defects in material and workmanship in the Gaumard product, except: (a) Damage resulting from accident, misuse, abuse, neglect, or unintended use of the Gaumard product; (b) Damage resulting from failure to properly maintain the Gaumard product in accordance with Gaumard product instructions, including failure to properly clean the Gaumard product; and (c) Damage resulting from a repair or attempted repair of the Gaumard product by anyone other than Gaumard or a Gaumard representative. Replacement parts are warranted for the remainder of the Warranty Period or ninety (90) days from shipment, whichever is longer. Services are warranted to be supplied in a workman-like manner. Gaumard does not warrant that use of the Products will be uninterrupted or error-free, or that the Products will operate with non-Gaumard authorized third-party products. THE FOREGOING WARRANTIES ARE IN LIEU OF AND EXCLUDE ALL OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED BY OPERATION OF LAW OR OTHERWISE, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR

A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. SUCH LIMITED WARRANTY IS GIVEN SOLELY TO THE ORIGINAL CUSTOMER AND IS NOT GIVEN TO ANY THIRD PARTY INCLUDING, WITHOUT LIMITATION, SUBSEQUENT PURCHASERS OR USERS OF THE PRODUCTS OR CUSTOMERS OF THE CUSTOMER. THIS WARRANTY IS VOID UPON TRANSFER OF PRODUCT BY CUSTOMER TO ANY OTHER ENTITY. SOME STATES DO NOT ALLOW THE EXCLUSION OF IMPLIED WARRANTIES SO THE ABOVE EXCLUSIONS MAY NOT APPLY TO CUSTOMER. These warranties do not apply to any Products that are supplied on a pre- release or “as-is” basis.

8. **Warranty Claims and Remedies.** In the event of any warranty claim, Gaumard will replace with new or repaired items any Product part or component that is in breach of the above limited warranties. Alternatively, Gaumard may elect to repay or credit to Customer an amount equal to the purchase price of the defective Product. Items replaced shall become Gaumard property. All claims shall be initiated by contacting Gaumard within the applicable Warranty Period and within thirty (30) days after discovery of the non- conformity. If Customer has failed to notify Gaumard within the Warranty Period, then Customer shall be barred from instituting any action thereafter. Customer shall not return the Product to Gaumard without prior authorization from Gaumard. If the necessary repairs to the Product are covered by this limited warranty, then Customer will pay only the incidental expenses associated with the repair, including any shipping, handling, and related costs for sending the product to Gaumard and for sending the product back to the first purchaser. However, if the repairs are not covered by this limited warranty, then Customer will be liable for all repair costs in addition to costs of shipping and handling. Upon request, Gaumard must be given access to and an opportunity to inspect the Product and any working areas and storage areas. These remedies shall comprise Gaumard's entire liability and Customer's exclusive remedy for breach of warranty and are in lieu of any other remedies at law or equity.

9. **LIMIT OF LIABILITY.** GAUMARD SHALL NOT BE LIABLE FOR ANY SPECIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, OR CONSEQUENTIAL LOSSES, DAMAGES, OR EXPENSES (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, DATA, OR USE), DIRECTLY OR INDIRECTLY ARISING FROM THE SALE, HANDLING, SERVICE, OR USE OF PRODUCT OR SERVICES ORDERED OR FURNISHED, OR FROM ANY CAUSE RELATING THERETO. EXCEPT FOR PERSONAL INJURY OR DEATH TO THE EXTENT RESULTING FROM GAUMARD'S NEGLIGENT OR INTENTIONALLY WRONGFUL ACTS OR OMISSIONS, IN NO EVENT SHALL GAUMARD BE LIABLE UNDER ANY LEGAL THEORY OR FOR ANY CAUSE RELATED TO A PRODUCT OR SERVICE, WHETHER BASED UPON WARRANTY, CONTRACT, TORT, NEGLIGENCE, OR OTHER THEORY, EVEN IF ADVISED OF THE POSSIBILITY THEREOF, FOR ANY AMOUNT IN EXCESS OF THE PRICE, FEE, OR CHARGE RECEIVED BY GAUMARD FOR SUCH PRODUCT OR SERVICE.

10. **Governmental Authorizations.** Customer is responsible for compliance and costs associated with all required licenses, permits, or other governmental authorizations, including but not limited to, any license or certification needed for Customer to use the Product, and any export or import license, exchange permit, or the like (“Licenses”), even if applied for by Gaumard on Customer's behalf. If any authorization is delayed, denied, revoked, restricted, or not renewed, Gaumard shall not be liable, and Customer is not relieved of its obligations. Customer represents and agrees that it will handle all Product and technical data related to the Licenses so that it conforms to all applicable U.S. laws and regulations, including U.S. export licensing laws and the U.S. Foreign Corrupt Practices Act. Customer shall not trans-ship, divert, re-export or otherwise dispose of any U.S. origin goods or technology obtained from Gaumard except as U.S. laws and regulations expressly permit.

11. **Indemnity.**

a. Gaumard agrees to indemnify, defend and hold Customer, its officers, directors, employees, agents and contractors harmless from and against all loss, damage, liability, cost and expense (including reasonable attorneys' fees and expenses) by reason of any claims or actions by third parties against Customer for (1) bodily injury or death, and damage, loss or destruction of any real or tangible personal property, which third party claims arise out of or relate to Gaumard's gross negligence or willful misconduct or (2) infringement or misappropriation by Gaumard of any intellectual property rights under this Agreement.

b. Customer agrees to indemnify, defend and hold Gaumard, its officers, directors, employees, agents and contractors harmless from and against all loss, damage, liability, cost and expense (including reasonable attorneys' fees and expenses) by reason of any claims or actions by third parties against Gaumard for (1) bodily injury or death or damage, loss or destruction of any real or tangible personal property, which third party claims arise out of or relate to Customer's gross negligence or willful misconduct; (2) infringement or misappropriation by Customer of any intellectual property rights; or

(3) Customer's or its customer's use of the Products or Services, including without limitation, defamation, libel, slander, obscenity, pornography, or violation of the rights of privacy or publicity, or spamming or any other tortious or illegal conduct.

12. **Software License.** For purposes of these Terms, the term “Software” includes all Gaumard computer software, firmware, and associated documentation, whether in printed or machine-readable form, supplied by reason of this Agreement or for use in connection with Equipment or Services. To the extent the Product includes Software, Customer's use of the Software is governed by the Gaumard End User License Agreement attached as Exhibit A to these Terms.

13. **Confidential Information.** Customer shall maintain the confidentiality of any information provided or disclosed by Gaumard relating to the Software (as defined above), business or customers of Gaumard, as well as this Agreement and its terms (including the pricing and other financial terms under which the Customer will be obtaining the Services hereunder). Customer shall use reasonable care to protect the confidentiality of Gaumard's information disclosed, but no less than the degree of care it would use to protect its own confidential information, and shall only disclose Gaumard's confidential information to its employees and agents having a need to know this information and who are subject to confidentiality agreements having terms at least as restrictive as those contained herein. The obligations of confidentiality set forth herein shall not apply to any information in the public domain at the time of disclosure.

14. **Intended Uses.** Products are only intended for the uses described in the applicable user's manual or instructions for use. Customer assumes all risks associated with non-listed uses of Products and hereby indemnifies and holds Gaumard harmless from any claim associated with such non-listed uses.

15. **Compliance with Laws.** Gaumard and Customer agree to comply with all federal and state laws that govern the enforceability and performance of this Agreement.

16. **HIPAA Compliance.** As of the Effective date, the Parties are not planning to transfer any personal patient information between them. However, the Parties understand and agree that this Agreement may become subject to the Health Insurance Portability and Accountability Act of 1996 as amended (“HIPAA”), the privacy and security regulations promulgated thereunder, including 45 C.F.R. 160, 162 and 164, as amended (the “HIPAA Regulations”), and Title XIII of Division A and Title IV of Division B (the “Health Information Technology for Economic and Clinical Health Act

("HITECH"), part of the American Recovery and Reinvestment Act of 2009 (Pub. L. 111-5) ("ARRA"). The Parties agree to strictly comply with HIPAA and to execute any documents that may be required by HIPAA, HITECH, and any other applicable federal or state privacy laws and regulations. The Parties agree that if they directly or indirectly gain access to Protected Health Information ("PHI") held by the other Party during any interaction, the receiving Party will keep the PHI confidential under the terms of this Agreement

17. State Reporting and Disclosure Laws. Unless otherwise noted in this Agreement, the cost of any Product training provided by Gaumard shall be included in the purchase price of the Product where applicable. Customer acknowledges and agrees that state reporting laws may require Gaumard to disclose certain aspects of this arrangement.

18. Fraud and Abuse. Gaumard hereby certifies that it is not currently a listed vendor in the: (a) Federal General Services Administration's "List of Parties Excluded from Federal Procurement or Nonprocurement Programs" in accordance with Presidential Executive Orders 12549 and 12689 "Debarment and Suspension;" and (b) in the Office of the Inspector General of the Department of Health and Human Services' "List of Excluded Individuals/Entities." Any discounted pricing terms offered under this Agreement may be a "discount or other reduction in price" under the Federal Anti-Kickback Statute, 42 U.S.C. § 1320a-7b(b). Customer shall take all actions necessary to comply with the Anti-Kickback Statute discount safe harbor regulations, 42 C.F.R. § 1001.952(h), including but not limited to, (1) maintaining accurate records reflecting the pricing terms of items and Services purchased under this Agreement, (2) fully and accurately report any discount received under this Agreement if applicable, and (3) make available information provided to Customer by Gaumard concerning cost reports and other filings with the government, including but not limited to, the Secretary of the U.S. Department of Health and Human Services or other state agencies.

19. Bankruptcy. Except as may be prohibited by applicable bankruptcy laws, a Party to this Agreement may elect to terminate this Agreement (including any Purchase Orders ) if any of the following situations arise: (1) the other Party becomes insolvent or is unable to pay debts as they become due; (2) a voluntary or involuntary bankruptcy proceeding is instituted by or against a Party hereto; or (3) an appointment of a receiver or assignee for the benefit of creditors occurs on behalf of a Party hereto.

20. Waiver and Severability. If either Party fails to perform obligations under this Agreement, such nonperformance shall not affect the other Party's right to enforce performance at any time. Waiver of any remedy or material breach of any subject matter contained in this Agreement shall not be viewed as a waiver unless agreed to by the Parties in writing. Each provision of this Agreement is separate and independent of one another, and the unenforceability of any provision will not affect the enforceability of any other provision. If any provision is held to be excessively broad or unenforceable, such provision shall be modified so that it is enforceable to the fullest extent possible by law.

21. Assignment. Customer shall not assign this Agreement without the prior written consent of Gaumard, which consent shall not be unreasonably withheld or delayed. Subject to the foregoing, the rights and obligations herein will be binding upon the successors and assigns of Customer.

22. Notices. Any required notices will be given in writing to Gaumard as set forth in the applicable Gaumard Purchase Order or other purchasing document.

23. Governing Law. Upon execution, this Agreement shall be governed and viewed under the laws of the State of Florida without reference to its conflict of laws provisions. Customer and Gaumard specifically agree that any action relating to the relationship between the Parties, the Agreement, or Products provided, purchased or licensed hereunder, shall be brought and tried in the Courts of Dade County, Florida. Customer waives all objections to, and consents to the jurisdiction of such Courts.

24. Miscellaneous. See applicable Gaumard Purchase Order documents, Gaumard Warranty documents, and Gaumard Cares Service Plan documents for other terms and conditions, which may include, but are not limited to: Term, Termination, Customer Training and Support, and Product Repairs and Tune Ups.

## 9.5 END USER LICENSE AGREEMENT

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### GAUMARD END USER LICENSE AGREEMENT

This End User License Agreement (“EULA”) sets forth the respective rights and responsibilities between the entity named in the Purchase Order associated with this EULA (“End User”) and Gaumard Scientific Company, Inc., a Florida corporation (“Gaumard”), relative to the Gaumard Software (as defined below). This EULA is effective as of the date Gaumard accepts and confirms the Purchase Order (the “Effective Date”). BY USING THE GAUMARD SOFTWARE, END USER IS AGREEING TO BE BOUND BY THE TERMS OF THIS EULA. IF END USER DOES NOT AGREE, END USER MAY NOT USE THE GAUMARD SOFTWARE.

#### 1. Definitions.

1.1 “Gaumard Documentation” means the Gaumard user and operations manuals, guides, and related materials provided by Gaumard to End User to facilitate use of the Gaumard Products.

1.2 “Gaumard Equipment” means Gaumard hardware components for medical simulation and training, including manikins and associated instrumentation, and other hardware and tangible products sold by Gaumard to End User.

1.3 “Gaumard Products” means Gaumard Software licensed and Gaumard Equipment sold or otherwise made available by Gaumard to End User currently or in the future.

1.4 “Gaumard Software” means the object code form of computer programs and Gaumard Documentation owned by Gaumard or its licensors and licensed to End User in accordance with this EULA. Gaumard Software includes (a) computer programs embedded in firmware in the Gaumard Equipment; (b) computer programs embedded in a separate medium (such as CD or flash drive) for use in conjunction with the Gaumard Equipment; (c) computer programs downloaded or received via mail from Gaumard; (d) computer programs used on servers storing or processing data related to the Gaumard Products; and (e) computer programs used to create and manage a network for the Gaumard Equipment, interface with the components of the Gaumard Equipment, manage and compute location information related to the Gaumard Equipment, and monitor health of the Gaumard Equipment.

#### 2. Software License and Restrictions.

2.1 License. Subject to End User’s compliance with the terms and conditions of this EULA, the Gaumard Sales Terms and Conditions, the Purchase Order, and the Gaumard Cares Service Plan Agreement, Gaumard grants End User a non-exclusive, non-transferable (except as otherwise set forth herein), personal license to execute and use the Gaumard Software for End User’s internal purposes, but only so long as the Gaumard Software is installed on the Gaumard Product on which it was originally installed. End User may not, directly or indirectly, sell, sublicense, display, timeshare, loan, lease, distribute, or create derivative works of the Gaumard Software.

2.2 Ownership. All rights, title, and interest in and to the Gaumard Software, and any derivative works thereof, whether created by Gaumard, End User, or a third party, will remain at all times solely and exclusively owned by Gaumard. Nothing in this EULA or the Purchase Order will be construed to grant End User any rights of any kind with respect to the Gaumard Software, except as expressly set forth in this EULA.

2.3 Reverse Engineering and Other Restrictions. End User will not, and will not allow any third party to, tamper with, modify, decompile, disassemble, derive the source code of, reverse engineer, or attempt to obtain the internal design of the Gaumard Software or Gaumard Products for any purpose whatsoever (collectively, “Restricted Acts”). If applicable law permits End User to take any of the Restricted Acts notwithstanding the previous prohibition, and End User wishes to take any Restricted Act notwithstanding the previous prohibition, End User will first provide Gaumard with thirty (30) days prior written notice. Gaumard may terminate this EULA at any time during such notice period without liability arising from such termination. The parties agree that all information needed for interoperability is available from Gaumard in accordance with applicable government directives.

2.4 Updates. From time to time Gaumard may develop new versions or updates for the Gaumard Software that may be made available to the End User as agreed under the terms of the Gaumard Sales Terms and Conditions, Gaumard Purchase Order documents, Gaumard Warranty documents, or Gaumard Cares Service Plan documents. Unless otherwise agreed to by Gaumard, End User shall be responsible for installing the provided new versions or updates for the Gaumard Software.

2.5 Proprietary Notices. End User agrees to maintain and reproduce on all copies of the Gaumard Software, any names, logos, copyright notices, trademarks, other proprietary markings, and legends that appear on the Gaumard Software.

2.6 Control of Duplication. End User will not, nor will it allow any third party to, circumvent the protection controlling the duplication or use of the Gaumard Software, for example and without limitation, any software lock controlling the number of copies End User may make of the Gaumard Software.

2.7 No Source Code. End User acknowledges and agrees that its rights under this EULA do not include rights to source code. In its exercise of the rights granted under this EULA, End User agrees not to take any action that would result in any requirement to disclose or make available to other parties the Gaumard Software in source code format.

2.8 Certification. Upon thirty (30) days written notice to End User from Gaumard, End User shall certify End User’s compliance with the restrictions and obligations in this EULA. Such requests will not occur more frequently than once per calendar year. If End User has used the Gaumard Software in violation of this EULA, End User shall, in addition to any other remedies Gaumard may have, pay Gaumard additional fees for the excess use according to Gaumard’s then-current price list and policies, plus a late payment charge of one percent (1.0%) per month (or the highest amount allowed by applicable law, if lower) for each month of excess use from the date of initial excess use.

2.9 Privacy and Recordings. End User will comply with all applicable laws, rules and regulations related to privacy, publicity and data protection related to use of the Gaumard Products. End User shall not use the Gaumard Software to record or collect personal data from any person in violation of End User’s policies or privacy statements. End User shall receive express consent from all persons recorded by the Gaumard Software sufficient for End User’s use, storage, and distribution of such recordings.

#### 3. Term and Termination

3.1 Term. This EULA commences on the Effective Date and continues perpetually, unless terminated earlier in accordance with the terms hereof.

3.2 Termination for Cause. This EULA is automatically terminated by Gaumard if the other party materially breaches this EULA, the Gaumard Sales Terms and Conditions, the Purchase Order, or the Gaumard Cares Service Plan Agreement. In addition, Gaumard may terminate this EULA if (a) End User becomes insolvent or makes an assignment for the benefit of End User’s creditors; or (b) a receiver is appointed or a petition in bankruptcy is filed with respect to End User and such petition is not dismissed within thirty (30) days.

3.3 Effect of Termination. Upon the termination of this EULA for any reason, all licenses granted in Section 2 above will immediately cease and terminate. Upon termination, End User will immediately cease using the Gaumard Software.

3.4 Survival. Sections 3 through 6 will survive the termination of this EULA.

#### 4. Confidential Information; Trademarks.

4.1 Confidential Information. End User acknowledges and agrees that the Gaumard Software is confidential information and contains trade secrets of Gaumard. End User agrees to (i) hold the Gaumard Software in the strictest confidence, (ii) not disclose the Gaumard Software to any third party for

any purpose, and (iii) use at least the same security measures as End User to protect its own confidential and trade secret information but no less than reasonable measures to protect the confidentiality of the Gaumard Software. End User agrees and acknowledges that any breach of the provisions regarding ownership or confidentiality contained in this Agreement shall cause Gaumard irreparable harm and Gaumard may obtain injunctive relief without the requirement to post a bond as well as seek all other remedies available to Gaumard in law and in equity in the event of breach or threatened breach of such provisions.

4.2 Trademarks. End User may not use Gaumard's trademarks, logos, service marks, or names in press releases, web sites, marketing, or other forms of public materials without the prior written consent of Gaumard. All use of the Gaumard trademarks and all goodwill associated with them will inure solely to the benefit of Gaumard.

#### 5. Disclaimer; Limitation of Liability; Infringement Indemnification

5.1 Warranty and Disclaimer. For a period of twelve (12) months from the Effective Date, Gaumard will (a) provide all updates to the Software that are made available generally, and (2) use reasonable efforts to fix or provide a workaround for any Gaumard Software defect or bug which prevents operation in substantial conformity with the Gaumard Documentation. Other than the above, the Gaumard Software is provided "as-is," with no express or implied warranties of any kind, including the warranties of merchantability, fitness for a particular purpose, or non-infringement.

5.2 Limitation of Liability. THE TOTAL LIABILITY, IF ANY, OF GAUMARD TO END USER OR ANY THIRD PARTY FOR ALL DAMAGES BASED ON ALL CLAIMS, WHETHER ARISING FROM BREACH OF CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, INDEMNITY, STRICT LIABILITY, TORT, OR OTHERWISE, ARISING FROM THE GAUMARD PRODUCTS IS LIMITED TO ONE HUNDRED DOLLARS. IN NO EVENT WILL GAUMARD BE LIABLE TO END USER OR ANY THIRD PARTY FOR ANY SPECIAL, INDIRECT, CONSEQUENTIAL, OR PUNITIVE DAMAGES, INCLUDING BUT NOT LIMITED TO, LOSS OF REVENUES, LOSS OF PROFITS, OR LOSS OF DATA, EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

5.3 Infringement Indemnification. Gaumard will, as further described below, indemnify, defend, and hold End User harmless, at its expense, against any claim or suit brought by a third party against End User alleging that any Gaumard Software furnished under this EULA infringes the United States patent, trademark, copyright or other intellectual property right of a third party. Gaumard will pay all settlements entered into or damages finally awarded, including attorneys' fees and costs, based on any such claim or suit; provided that End User gives Gaumard prompt written notice of such claim and gives Gaumard information, reasonable assistance, and sole authority to defend or settle the claim. In defense or settlement of the claim, Gaumard may obtain for End User the right to continue using the Gaumard Software, replace or modify the Gaumard Software so that it becomes non-infringing, or, if such remedies are not reasonably available, grant End User a refund for the associated Gaumard Products (depreciated over three years) and accept their return. Gaumard will not have any liability if the alleged infringement is based upon (a) the use or sale of the Gaumard Software in combination with other products or devices not furnished by or approved by Gaumard; (b) the use of the Gaumard Software in a manner for which they were not designed as described by the Gaumard Documentation; (c) any modification of the Gaumard Software not performed by or authorized by Gaumard;

(d) any use of Gaumard Software by End User after End User learns of such allegation of infringement; or (e) any failure by End User to utilize a non-infringing version of the Gaumard Software made available by Gaumard along with notice that such update is non-infringing. The obligations set forth in this Section 5.3 are Gaumard's sole obligations, and End User's sole and exclusive remedy, for the Gaumard Software infringing third party intellectual property rights.

#### 6. Miscellaneous.

6.1 Binding Effect; Assignment. This EULA will be binding upon, and inure to the benefit of, End User's and Gaumard's respective permitted successors and permitted assigns. Neither party may assign or transfer this EULA or any of the rights, privileges, duties or obligations under this EULA without the prior written consent of the other party, except that either party may assign this Agreement to any entity controlled by, controlling, or under common control with such party at such time, as well as in connection with the sale, transfer, merger, or acquisition, whether by operation of law or otherwise, of substantially all of the assets of such party. In addition, if End User transfers the Gaumard Product on which the Gaumard Software is installed to a third party, End User may assign this EULA to such third party, provided that the third party agrees in writing with Gaumard to be bound by this EULA.

6.2 Notices. Any written notice required by this EULA will be deemed made (a) when delivered by personal service, (b) one (1) business day after being sent by recognized international overnight courier service (such as FedEx), or (c) when received, if sent by certified or registered mail, postage prepaid, return receipt requested. Any such notice given to a party shall be sent to the addresses on the attached Purchase Order. By giving to the other party written notice thereof, the parties hereto and their respective permitted successors and assigns will have the right from time to time to change by written notice their respective addressee or address for notices.

6.3 Applicable Law. The validity of this EULA and the rights, obligations and relations of the parties hereunder shall be construed and determined under and in accordance with the substantive laws of the State of Florida. All disputes arising under or related to this EULA shall be resolved exclusively in the State or Federal Courts located in Dade County, Florida. The parties consent to the jurisdiction and venue of such courts and waive any claims as to inconvenient forum. The judgments of such courts may be enforced in any court of competent jurisdiction.

6.4 Export Control. End User will not export or re-export the Gaumard Software, including any technical data, except as authorized and permitted by, and in compliance with, the laws and regulations, including but not limited to all export and re-export laws and regulations, of the United States.

6.5 Severability. If any provision of this EULA is invalid or unenforceable in any circumstances, it will be interpreted as much as possible to reflect the intent of the parties, and its application in any other circumstances and the remaining provisions of this EULA will not be affected thereby.

6.6 Entire Agreement. This EULA constitutes the entire agreement and understanding of the parties relating to the subject matter thereof. This EULA supersedes all prior written and oral agreements and all other communications between End User and Gaumard (or a Gaumard distributor) regarding the subject matter hereof. No contradictory terms and conditions of any purchase order, invoice, or other document issued by End User relating to the subject matter of this EULA shall be binding, unless agreed by the parties.

6.7 Waiver of Breach. No waiver by a party of any breach of this EULA will constitute a waiver of any other breach of the same or other provisions of this EULA. No waiver by a party will be effective unless made in a record signed or otherwise authenticated by an authorized representative of such party.

6.8 Relationship of the Parties. The parties are independent contractors. Nothing in this EULA or in the activities contemplated by the parties will be deemed to create an agency, partnership, employment or joint venture relationship between the parties. Neither party will have any responsibility nor liability for the actions of the other party except as expressly provided in this EULA. Neither party will have any right or authority to bind or obligate the other party in any manner or make any representation or warranty on behalf of the other party. This EULA is made and entered into for the sole protection and benefit of Gaumard, its licensors and suppliers, and End User, and no other person or entity shall be a direct or indirect beneficiary of or shall have any direct or indirect cause of action or claim arising from this EULA.

All rights not expressly granted in this license agreement are reserved by Gaumard.

#### ACKNOWLEDGMENT

**By installation of this software, you acknowledge that you have read and understand the foregoing and that you agree to be bound by its terms and conditions. You also agree that this agreement is the complete and exclusive statement of agreement between the parties and supersedes all proposed or prior agreements, oral or written, and any other communications between the parties relating to the license described herein.**

## 9.6 CONTACT TECHNICAL SUPPORT

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Before contacting Technical Support, please make sure to have the following:

1. Your simulator's serial number
2. Access to the simulator for possible troubleshooting as needed

### Technical Support

Email: [support@gaumard.com](mailto:support@gaumard.com)

USA: 800-882-6655

INT: 01-305-971-3790

## 9.7 GENERAL INFORMATION

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### Sales and Customer Service

E-mail: [sales@gaumard.com](mailto:sales@gaumard.com)

USA: 800-882-6655

INT: 01-305-971-3790

Fax: 305-252-0755

### Post

Gaumard Scientific

14700 SW 136 Street

Miami, FL 33196-5691

USA

### Office Hours

Monday-Friday, 8:30am - 7:30pm EST (GMT-5)





**Gaumard**<sup>®</sup>  
Simulators for Health Care Education

Gaumard<sup>®</sup>, ZOE<sup>®</sup>, Michelle<sup>®</sup>, Mike<sup>®</sup>, PEDI<sup>®</sup>, Susie Simon<sup>®</sup>, Susie<sup>®</sup>, Simon<sup>®</sup> Code Blue<sup>®</sup>, SIMA Models<sup>®</sup>, SIMA GYN/AID<sup>®</sup>, Virtual Instruments<sup>®</sup>, Codemaker<sup>®</sup>, Code Blue<sup>®</sup>, NOELLE<sup>®</sup>, Simulation Made Easy<sup>™</sup>, HAL<sup>®</sup>, eCPR<sup>™</sup>, Zack<sup>™</sup>, RITA<sup>™</sup>, Chloe<sup>™</sup>, Seatbelt Susie<sup>™</sup>, Krash Kids<sup>™</sup>, Premie<sup>™</sup>, UNI<sup>™</sup>, Omni<sup>®</sup>, Omni<sup>®</sup> 2, SmartSkin<sup>™</sup> are trademarks of Gaumard Scientific Company.

Always dispose of this product and its components in compliance with local laws and regulations.

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