

SUSIE[®]

Prehospital and Nursing Care

S1001



Gaumard[®]
Simulators for Health Care Education

SUSIE 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.

User Guide 12.6.1

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Care and Cautions

Overall Warnings

Damage caused by misuse may void the manufacturer's warranty. Failure to comply with the following guidelines could result in injury or damage to the equipment. Additional warnings are found throughout the documentation.

SET UP

Do not disconnect the communications module while the GUI software is running. The software will halt, and the module may be damaged.

When connecting the battery to the simulator, make sure to match the two color-coded connectors to the corresponding color-coded battery terminals.

Do not pull the skin's ECG lead connection located on the left side of the chest cavity. Damage to this connection will require repair not covered under warranty.

Refer to the computer's documentation for important information regarding use, charging, and care before setting up the system.

STORAGE

Store SUSIE in a cool, dry place. Extended storage above 85° Fahrenheit (29° Celsius) will cause the simulator to soften and slowly warp. It is acceptable to *operate* SUSIE at an ambient temperature of 95° Fahrenheit (35° Celsius).

Do not store the simulator with a discharged backup battery. If the simulator will not be used for an extended period, re-charge the battery at least once every 3 months to prevent damage to the battery.

PROCEDURES

Do not attempt to intubate without lubricating the airway adjunct with a silicone oil lubricant (provided). Failure to do so will make intubation very difficult and is likely to result in damage.

The provided talcum powder should be used sparingly on top of the lungs and ribs to eliminate any noise caused by rubbing of internal parts during breathing.

Mouth to mouth resuscitation without a barrier device is not recommended, as it will contaminate the airway. Treat SUSIE with the same precautions that would be used with a real patient.

IV ARMS

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 gauge will reduce the lifetime of the lower arms' skin and veins.

CONSUMABLES

When the arm veins require replacement, contact Gaumard to arrange for a lower arm exchange. For a small fee, we will deliver reconditioned and warrantied lower arm assemblies to your facility.

After receiving the replacement arms, use the same box and the enclosed shipping label to return the old arms to Gaumard. For international and express service, additional fees may be charged. Refer to the Consumables and Replacement Parts section of this guide, and contact customer service for more information.

LATEX WARNING

Vein tubing contains latex, which may cause allergic reactions. Users allergic or sensitive to latex should avoid contact. Discontinue use of this product and seek medical attention if an allergic reaction occurs.

NASOGASTRIC FEEDING

Before introducing fluids through an NG tube, please review the following requirements:

Maintain the simulator with a 30° inclination angle or higher.

Wait until the software logs the tube placement. Inserting fluids before the software logs the tube placement will void the warranty and can permanently damage the simulator.

Do not exceed a feeding rate of 1 mL/second.

SUSIE must be powered on for fluids to be extracted through the stomach/ intestine fluid access port. Failure to do so can permanently damage the system.

CLEANING

Clean the simulator with a cloth dampened with diluted liquid dishwashing soap. If medical adhesives remain on the skin, clean with alcohol wipes. **DO NOT USE "GOO GONE"** as the citric acid in the formula will cause pitting of the various materials comprising your simulator.

The simulator is "splash-proof" but not waterproof. Do not submerge or allow a large volume of fluid to enter the interior of the simulator.

Do not expose the laptop computer to water or excessive dust.

STOMA AND BREAST EXAMINATION INSERT GUIDELINES, WARNINGS, AND MAINTENANCE

The stomas and breast inserts are constructed of material that approximates tissue texture; therefore, use the same gentle techniques as you would when working with a patient.

USER GUIDELINES

Always handle the stomas with clean hands.

Always palpate the breast using the fatty pads of the middle three fingers.

MAINTENANCE

Prevent items from resting or pressing against the stomas/breasts as indentations will form on the pressure points. The stomas/breasts may return to the normal shape after the pressure is relieved.

When removing the stomas, gently separate the stoma flange from the torso, and do not apply force directly to the stoma tissue itself.

Place talcum powder on the stoma/breast surface to reduce tackiness. Reapply talcum powder as needed.

Clean the stomas/breast using a mild solution of soap and water.

Apply talcum powder to return the surface to a skin-like feel and appearance.

Always remove the stomas/breasts during transport.

Store the breast examination inserts facing down inside the protective case when not in use.

WARNINGS

Do not palpate the breast using fingernails

Do not clean the inserts with alcohol or aggressive solvents

Do not pack any sharp objects with the stomas/breast

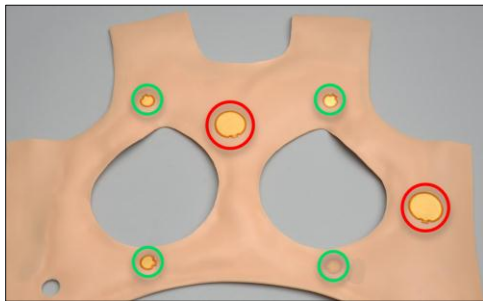
Do not press the stomas/breast against soiled surfaces, ink, or newsprint. The stoma/breast material is absorbent.

ELECTRICAL THERAPY

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. Always treat SUSIE as a real patient.

SUSIE is equipped with 4 ECG electrode sites marked **Green** that generate an ECG lead II waveform detectable on most of today's ECG monitors.

Defibrillate only on the large sternum and apex sites, circled **RED** below.



NEVER deliver a shock to ECG electrode targets on the shoulders or waist, marked **Green**. Doing so will not create a fire hazard, nor is there risk of shock to the provider, but internal damage to the simulator will result. This type of damage is considered improper use and it is NOT covered by the simulator's warranty. The system will require repair at our facility.

ECG AND ELECTRICAL THERAPY CHECKLIST AND 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, including removing any and all gel residue on the defibrillation patches from previous use(s). 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.
 - Do not re-use the gel-adhesive pads. Do not leave them on for next day use.
 - Use hard paddles or wet-gel pads preferably. 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.
 - Real medical products, especially electrodes, sometimes use powerful adhesives that can be difficult to remove. A gentle, degreasing cleanser may be needed. Refer to Care and Cautions for more information.
 - Electrode gel on the skin between any two electrode targets can become a pathway for electrical current, just as in real life. If this occurs, SUSIE's skin can be burned.
 - Do not allow defibrillation pads to overlap ECG sites. Doing so will may damage the simulator and cause arcing.
 - 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 SCRATCH** the conductive patches with abrasive objects; doing so will cause irreversible damage to the conductive sites and subsequently cause arcing.
 - **DO NOT USE "GOO GONE"** as the citric acid in the formula will cause pitting of the various materials comprising your simulator.

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Getting Started

Overview

Your Susie S1001 prehospital and nursing care simulator is equipped with the following features.

AIRWAY

- Oral or nasal intubation
- Tongue edema and laryngospasm
- Sensors detect depth of intubation
- Automatic unilateral chest rise with right mainstem intubation

BREATHING

- Ventilation is measured and logged
- Select independent left, right lung sounds
- Multiple lung sounds are synchronized with selectable breathing patterns
- Accommodates assisted ventilation, including bag-valve-mask and mechanical support with chest rise

CARDIAC

- Multiple heart sounds
- Chest compressions are measured and logged
- Electrical therapy using real equipment

CIRCULATION

- Take blood pressure readings on the left arm using palpation or auscultation via modified cuff
- Bilateral carotid and femoral pulse and left radial pulse
- Pulses are continuous, synchronized with the ECG, even during a paced rhythm
- Bilateral IV training arms
- Oxygen saturation monitors placement detection on the left index finger

SYSTEMIC

- Programmable bowel sounds
- Decubitus ulcers and ulcerated foot
- Colostomy and ileostomy exercises
- Perform female/male catheterization and irrigation
- Enema exercises

BSE TECHNIQUES

- Silicone breast inserts

- Left breast includes six discreet nodes representing (in a slightly exaggerated form) various stages of fibrocystic disease (chronic mastitis).
- Normal right breast free of lumps

SIMULATED VITAL SIGNS MONITOR

- Extended 19" monitor screen displays the Gaumard Monitors vital sign software
- Display up to 8 numeric values including HR, ABP, RR, CO2, SpO2, Temp, NIBP, and time
- Select up to 5 dynamic waveforms including ECG II, ABP, respiration, CO2, and pulse oximetry
- Display images such as x-rays, CT scans, lab results, or even multimedia presentations.

EDUCATIONAL

- Clinical Nursing Skills
- Infection Prevention

OTHER

- Streaming voice

INCLUDED ACCESSORIES

- Multimedia laptop 15" display
- Genuine Windows® 7
- Streaming voice Headset
- Communications Module
- Communications Cable

See shipping manifest for an up to date equipment list.

OPTIONS

MICRO+ recording and debriefing system

- Simultaneously control the simulator and video capture from the same portable computer
- Real time capture of audio and video
- Seamlessly integrates the log file and patient monitor with the audio and video feeds
- 1 video stream recording
- 1 audio stream recording
- 1 patient monitor recording
- Includes 1 USB wired camera with microphone

Terminology

It is wise to spend a moment familiarizing yourself with some of the terminology that will be used to discuss simulation with the SUSIE system.

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

GUI - the Gaumard User Interface or "GaumardUI" - is the software application, used to control the simulator and evaluate care providers.

Palette Item - any full or partial set of physiological parameters that have been grouped and saved under a single name.

Profile - a unique GUI configuration, including custom palette, scenarios, and options. Each Profile acts as a separate program, in that 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 "playlist." 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 ("Wait") or a pause ("Wait Indefinitely").

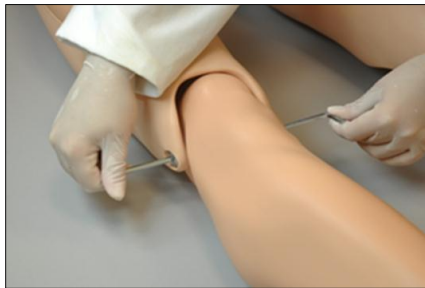
Equipment Setup

Leg Assembly

1. Remove the fixed bolts from the knee joints using the hexagonal wrench included.



2. Position the lower legs and re-insert the knee joint bolt. Then, secure the knee bolts without over tightening.



Breast Examination Inserts

SUSIE's breast examination inserts are shipped in a protective case. The package includes (1) normal right breast labeled (R1) and (1) abnormal left breast labeled (L1). For detailed information on pathology of each breast, go to page 82.

Warning:

Always store the breast inserts inside the protective case after simulation and during transport. Go to page 6. for more maintenance and care information.

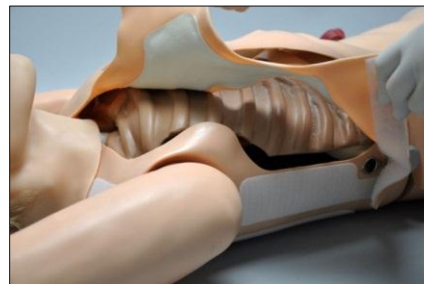
1. Begin by extending SUSIE's arms on a flat surface.



2. Unfasten the skin from the VELCRO attachment located on both shoulders.



3. Unfasten the skin from the VELCRO adhesive located laterally. The skin will remain attached to the metal bolts located on either side. Do not remove the hip bolts.

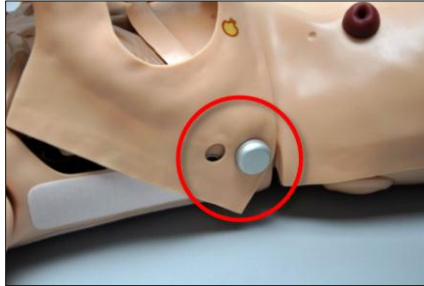


4. Lift the skin slightly to expose the chest cavity.



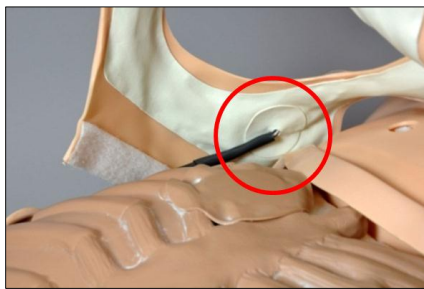
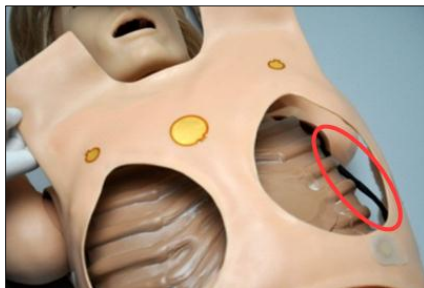
Warning:

Only lift the skin to the point shown on the figure below. Lifting the skin higher can cause damage to the skin at bolt connection.



Warning:

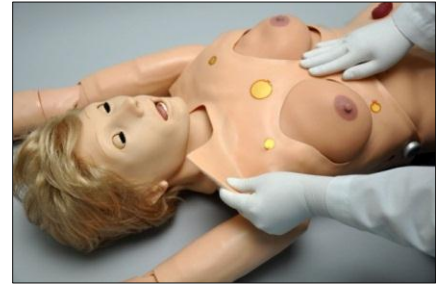
Do not pull the skin's ECG lead connection located on the left side of the chest cavity. Damage to this connection will require repair not covered under warranty.



5. Carefully place the breast inserts beneath the chest skin.



6. Adjust the placement of each breast insert and then tightly secure the chest skin by first attaching the VELCRO located on both shoulders.

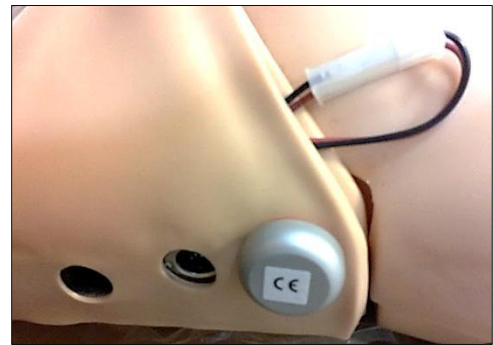


7. Adjust the skin around the power and communication ports located on the right side.
8. Tightly fasten the skin's lateral Velcro attachments.

Internal Backup Battery

The simulator is equipped with an internal backup battery to maintain functionality in the event the power adapter is unplugged, or the simulator is requires transportation from one room to another.

Connect the internal battery leads by clipping the white connectors together. Then, tuck the battery wiring underneath the skin.



BATTERY LIFE

The backup battery indicator is visible on the GaumardUI's status panel once the software establishes a connection with the simulator. For more information about the communication bars and battery indicator, go to page 21.

Control Computer

The simulator is controlled from a laptop computer equipped with an extended LCD monitor and a USB communication module.

Refer to the laptop's documentation for important information regarding use, charging, and care before continuing.

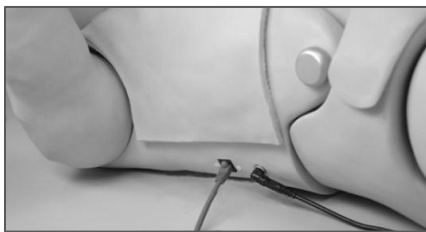
Communication Module

The simulator is started from the GaumardUI control software. Follow the steps below to connect the simulator to the control computer.

1. Connect the communication cable to the USB communication module.



2. Connect the communication cable to the communication port on the simulator's right side.



3. Finally, connect the communication module to an available USB port on the tablet computer.



Streaming Voice Headset

Connect the streaming voice headset MIC and "speaker" connectors to the designated ports on laptop computer. Use the headset along with the Speech software controls to speak as the voice of the simulator. For more information on the streaming voice function, go to page 49.

Virtual Monitor

The control computer utilizes an extended monitor to display the simulator's vital signs. Follow the steps below to connect the monitor screen to the laptop computer.

1. Begin by locating the laptop's power input and video output. The location of these two ports may vary by computer model.



2. Connect the charger's AC plug into the power outlet and the power adapter plug into the laptop power port.
3. Connect the video cable to the video-out port on the laptop.



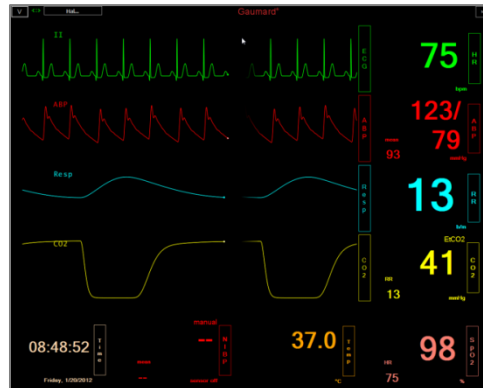
4. Connect the video cable to the LCD monitor screen.



5. Connect the AC cord plug to the power outlet and the other end to the monitor's AC input.

VIRTUAL MONITOR

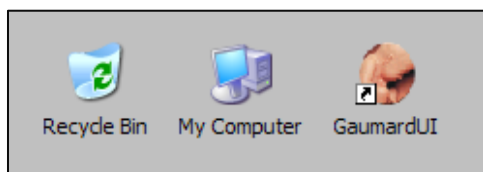
The extended LCD monitor displays simulator's vital signs information when the GaumardUI control software is started. The interactive vital signs software includes waveforms and numerical readings for most vital sign parameters. Continue onto the next section to begin working with the GaumardUI control software and the virtual vital signs software.



Working with GaumardUI

Initializing SUSIE

After reading the Care and Cautions section of the guide, double click the GaumardUI icon located on the laptop's home screen to start the simulator.

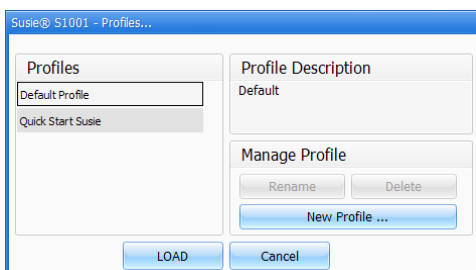


The software activates the simulator within 1 minute after clicking the start button. When the GaumardUI is not active, the simulator is in stand-by. To address connection and startup issues, go to page 102.

The simulator's vital signs are automatically displayed on the extended monitor when the GaumardUI software is started. If no image is shown on the extended screen, go to page 107 to enable the extended monitor option.

Profile Selection

After the startup screen, the Profile selection window is shown.



A profile is a unique configuration of customized palettes, scenarios, and options. Each profile functions independently in that changes made to one profile have no effect on the others.

It is recommended that you use the **Quick Start Scenarios** profile, which was created in conjunction with experienced healthcare instructors and working medical professionals. Once the profile is selected, click **Load** to continue.

- **Default** – includes one palette with healthy vital signs.

- **Quick Start SUSIE** – Includes eleven preprogrammed scenarios. Two are linear, and nine are branched.

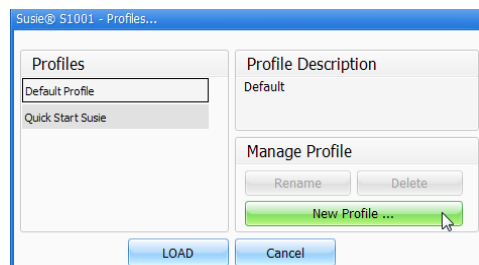
For more information on the items included on the Quick Start profiles, navigate to page 45.

Creating a new profile

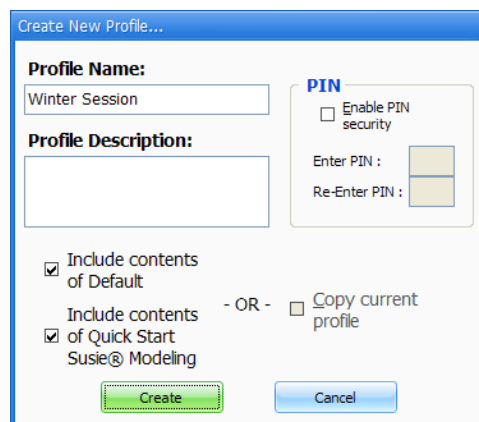
Profiles are used to organize and protect software settings. As you begin to customize SUSIE, it will become clear how profiles can best serve your needs. For example:

- It may be appropriate to assign one profile to each user of your SUSIE system.
- Others may choose to create a profile dedicated to a specific academic course, which might be taught by multiple instructors.
- For the most detailed exercises, it is sometimes useful to devote an entire profile to one particular subject area, or even one particular scenario.

To create a user made profile, click on the **New Profile** button on the right panel.



Enter a name for the new profile followed by a description.



To import and export profiles, navigate to page 63.

Environment

THE STATUS PANEL

The Status panel is visible along the left edge of the GaumardUI window at all times. After the connection with the simulator is established, the status panel displays current information about the battery level, signal strength, volume controls/levels and vital signs in real time.

Status panel entries and features mirror the simulator's hardware configuration. Light blue icons show active features and values undergoing changes are highlighted yellow. Click on the volume bars to adjust the volume of each sound.

The screenshot shows the 'Status' panel with the following sections and labels:

- Header:** 'Status' title, signal strength bars, and a battery indicator.
- Navigation:** 'ABC' and 'More' buttons.
- Airway Section:**
 - Icons for Tongue Edema, Pharyngeal swelling, and Laryngospasm.
 - Throat Sound: **normal** (with a volume bar).
- Breathing Section:**
 - Resp. Pattern: **normal** (with a volume bar).
 - Rate: **13** bpm In: **32** % (values are highlighted yellow).
 - Right Lung: Active feature (light blue icon).
 - Up snd: **normal** (with volume bar)
 - Lo snd: **normal** (with volume bar)
 - Left Lung: Active feature (light blue icon).
 - Up snd: **normal** (with volume bar)
 - Lo snd: **normal** (with volume bar)
- Circulation Section:**
 - (O2-Sat: **98** %) (value highlighted yellow)
 - (EtCO2: **41** mmHg) (value highlighted yellow)
 - Cardiac Rhythm: **Sinus** (with a volume bar)
 - Heart Rate: **80** bpm (value highlighted yellow)
 - Sinus arrhythmia: Inactive feature (grey icon)
 - Heart Sound: **normal** (with a volume bar)
 - Blood Pressure: L **125** / **81** mmHg R (values highlighted yellow)
 - Absent Pulses: Radial (L, R), Pedal (L, R) - all inactive (grey icons)

Labels on the left side of the panel:

- Active feature (points to light blue icons)
- Value undergoing change (points to yellow highlights)
- Inactive feature (points to grey icons)

Labels on the right side of the panel:

- Battery indicator
- Signal Strength
- Volume controls

COMMUNICATION INDICATOR

The signal icon is used to monitor the hard-wired connection between the laptop and the simulator.



The indicator is clear when no attempts to communicate with the simulator are being made; for example when the module is not connected to the computer or the system is in STAND-BY mode. Full bars indicate excellent communication between the computer and the simulator (i.e., normal operation).

BATTERY INDICATOR

The battery charge level is displayed in real time when a connection is established with the simulator.

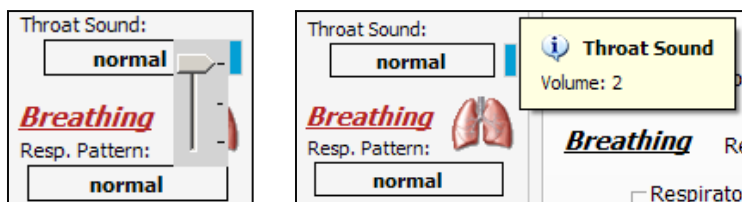


The exclamation mark is shown when there is no communication with the simulator. When the backup battery is so low that the indicator turns blinking red, the simulator is sent automatically to STAND-BY mode (to protect some of the simulator's internal components) and will not operate until the simulator is reconnected to the power adapter.

Always operate the simulator connected to power adapter. The internal battery only provides temporary power during transport or an outage.

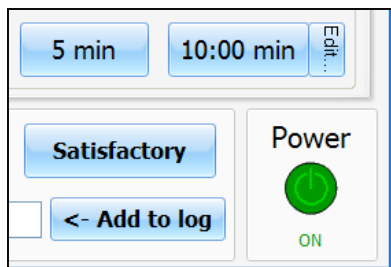
SIMULATOR FEATURE VOLUMES

Adjust the volume of each sound using the Status Panel volume control. Click on the volume level indicator next to each sound to raise or lower the volume of the feature. Volume changes are applied immediately and do not need to be submitted using the apply panel.



STAND-BY

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



Details

The individual parameter controls displayed on the details tab are the simplest form of controlling the simulator. To update the simulator's condition, change the value of the vital sign control and submit the change using the "Apply" menu. Changes are applied immediately by clicking the "NOW" button.

Please note that vital signs parameters not specified or left blank will remain unchanged.

Vital sign parameter controls are divided into several categories. Each vital sign control entry has a corresponding entry on the status panel providing real time information on the status.

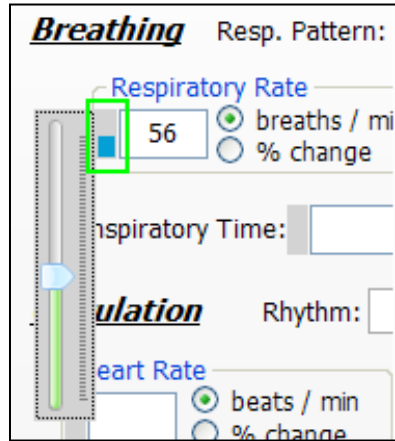
The Details tab is also used to create Palette items. A single palette item stores the settings of several vital sign parameters controls. For more information about creating and saving palette items, go to page 25.

The screenshot shows the 'Details' tab of the Gaumard simulator interface. At the top, there are tabs for 'Details', 'Palette', 'Lab', 'Scenario', 'Model', and 'Log'. Below the tabs are buttons for 'Clear Settings', 'Load Palette Item', and 'Save as Palette Item'. A legend indicates 'On' (blue dot) and 'Off' (black dot). The interface is divided into several sections: 'Appearance' with a Cyanosis Level slider and Muscle Tone dropdown; 'Airway' with Upper Airway Sound dropdown and Crying radio button; 'Breathing' with Resp. Pattern dropdown, Respiratory Rate (breaths/min or mmHg), EtCO2 (mmHg or % change), Inspiratory Time, and Left/Right Lung (Chest Rise or Sound) controls; 'Circulation' with Rhythm dropdown, Heart Rate (beats/min or % change), Heart Sound, Blood Pressure (Systolic/Diastolic in mmHg or % change), and Absent Pulses (Brachial Right/Left) radio buttons; and 'Other' with Temperature (°C) and Blood Glucose (mg/dL) input fields. At the bottom, an 'Apply' section contains buttons for 'NOW', '10 sec', '30 sec', '1 min', '2 min', '5 min', and '10:00 min', along with a 'Help' button.

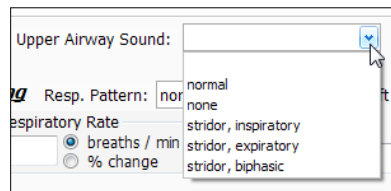
Vital sign parameter controls shown on the Details tab are dependent on the simulator's features and configuration. GaumardUI automatically displays applicable controls once the connection is established.

CHANGING VITALS

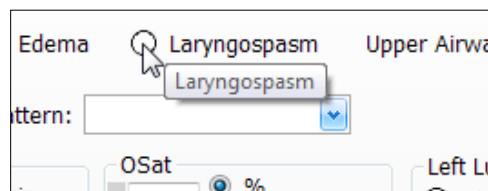
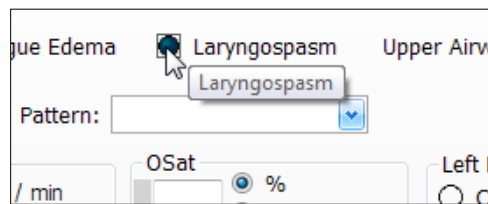
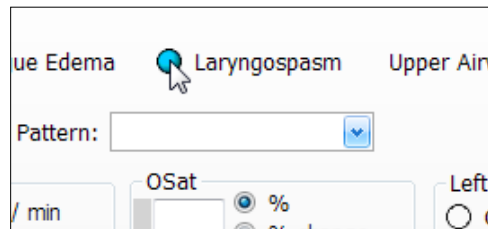
Click or tap the slider control to adjust numerical values using the stylus. Alternatively, use the keyboard for manual entry. Please note, no changes will be made to the simulator's condition until the new settings are submitted using the "Apply" panel.



Click on the down arrow to access different sound types and rhythms.



Click the feature control button to enable (blue) or disable (black) features such as laryngospasm. Alternatively, click the icon clear to make no change to the status. Some feature controls may not be available depending on the simulator configuration. No changes will be made to the simulator's condition until the new settings are submitted using the "Apply" panel.

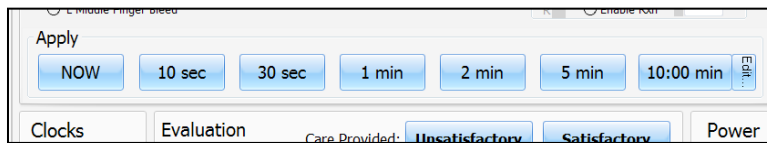


For information on the specific controls for your simulator's features, navigate to the "Working with SUSIE" section of this guide.

APPLY PANEL

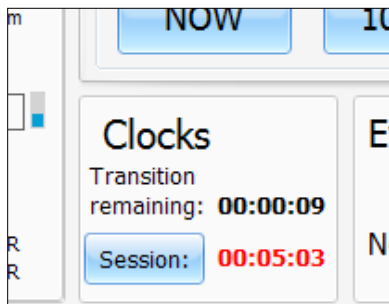
After the new settings are selected, click any of the “Apply” buttons located near the bottom of the page to submit and update the simulator’s condition. Click **NOW** to update the simulator’s condition instantly. Alternatively, click a trending timer to update numerical vital sign parameters (e.g. heart rate, blood pressure) gradually in the time allotted. Click the edit button to customize a transition time.

Please note that vital signs parameters not specified or left blank will remain unchanged.

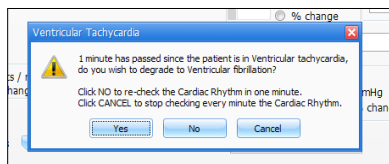


Vital sign parameter states such as cardiac rhythm and breathing pattern update immediately. Numerical parameters, however, such as heart rate and respiratory rate can be trended.

As transitions are applied, the time remaining in the transition is displayed on the **Clocks** panel at the bottom of the GaumardUI window. If there is already an ongoing transition at the moment you click an Apply button, it will stop and a new transition will begin from the current physiological state.

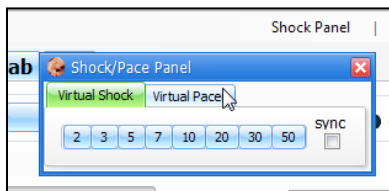


When cardiac rhythm is maintained at Ventricular Tachycardia for one minute, the following prompt dialog box will be displayed.



Click “Yes” to degrade the cardiac rhythm to ventricular fibrillation. Click “No” to maintain the cardiac rhythm and recheck after 1 more minute. Click “Cancel” to stop the software from checking the cardiac rhythm every minute.

To apply electrical therapy virtually, click the “Shock Panel” shortcut near the top of the screen. If the Shock Panel shortcut is not shown on the menu bar, click Setup>Options>General and check mark “Show defibrillation/cardioversion/pacer panel”.



PALETTE ITEMS

The Details tab is also used to create Palette Items. A single palette item stores the settings of several vital sign parameters controls in a single loadable object. Use a palette item to quickly update a set of vital signs parameters at the same time. For example, a percentage drop in all cardiovascular related vital signs. A large library of pre-programmed palette items is included in the Quick Start Profile.

Cardio Drop

Airway Tongue Edema Pharyngeal Swelling Laryngospasm Upper

Breathing Resp. Pattern: [dropdown]

Respiratory Rate: [slider] breaths / min % change

OSat: [slider] -5 % change %

EtCO2: [slider] mmHg % change

Inspiratory Time: [slider] %

Circulation Rhythm: [dropdown]

Heart Rate: [slider] -15 beats / min % change

Sinus Arrhythmia

Blood Pressure: Systolic [slider] -10 / Diastolic [slider] -10 mmHg % change

Absent Pulses: Radial Left Pedal Left

Other Temperature: [slider] °C

Bowel Sounds: [checkbox]

Palette items are also used to build scenarios. In the Scenario tab, palette items are queued in a list and played back in succession to automate the changes in the simulator's condition during a training exercise. For more information about scenario building, go to page 27 .

CREATING PALETTE ITEMS

To create a Palette Item, choose the desired parameters on the Details page and click the “Save as Palette Item” button near the top of the page.

Speech Log Gau

Save as Palette Item

Legend: On Off

Enter a name for the palette, specify a description, and color code. Click “Save” to create the new palette Item. Palette items are stored in the active profile.

Save as Palette Item

Palette Item Name: Healthy

Palette Item Description: Normal Vital Signs

Color: Healthy Care Required Critical Other

Save Cancel

Navigate to the Palette tab to view a collection of all the palette items in the current profile.

Palette

Use the Palette tab to sort, manage, and edit the palette items in the current profile. Each profile stores an independent library of palette items.

To modify the vital sign parameters programmed into a palette, select a palette and click the Edit button. After the changes are made using the Details tab, click the “Save as Palette” Item button. For more information on customizing the Palette, see the Tips on Palette Item and Scenario Creation section of the appendix.

To apply a palette and change the simulator’s condition, select the palette item and click one of the “Apply” menu options.

The screenshot shows the Gaumard software interface with the 'Palette' tab selected. The interface includes a table of items, a 'View' panel, and an 'Apply' panel.

Name	Description
99% O2-Sat	
Distal Pulses Return	
Healthy Susie	All vitals at a healthy range
SVT recovers	normal vitals
1st deg AVB	85 bpm, BP 100/60
Bradycardia	RR 10, HR 45, 2nd deg. AVB (Type II)
Closed airway	all difficult airway actuators on
Cyanotic	full cyanosis
Pace response	OSat 97%, BP 100/70
respiratory allergy	wheezing, difficulty exhaling, tongue edema
responsive SVT	HR 165, BP 80/55
SVT	160 bpm, BP 100/60
V Tach, stable	RR 16/min, HR 140bpm, BP 120/80
apnea	RR 0/min
Asystole rhythm	patient is in asystole
Asystole	no electrical activity, apneic
Pulseless Vtach 1	All vitals set for unresponsive patient, apnea, cyanotic, HR 168, BP 50/30

View

- Sort by Name
- Healthy
- Care Required
- Critical
- Other

Selected Item

- Edit...
- Delete
- Properties

Apply

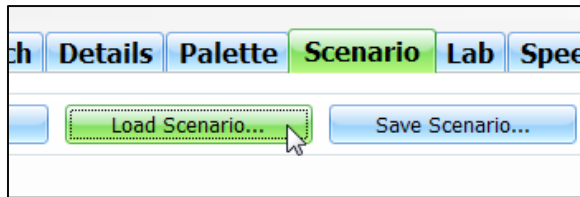
- NOW
- 10 sec
- 30 sec
- 1 min
- 2 min
- 5 min
- 10:00 min

Scenarios

PREPROGRAMMED LINEAR SCENARIOS

GaumardUI includes several preprogrammed scenarios to simulate variety of complications. All preprogrammed scenarios are included in the “Quick Start Profile”. To switch between profiles without exiting the software, click FILE> Profile. For this example select and load the “Quick Start Profile”.

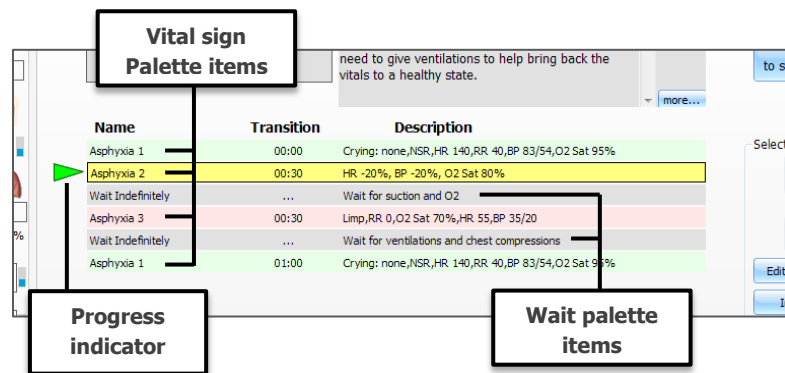
To use a preprogrammed scenario, go to the Scenario tab and click “Load Scenario”.



The Load Scenario dialog box appears. Select a scenario and click on **Load**. For a list of all the scenarios available, go to page 41.

LINEAR SCENARIOS OVERVIEW

Linear scenarios are composed of **vital signs palette** items and **wait palette** items played in succession.



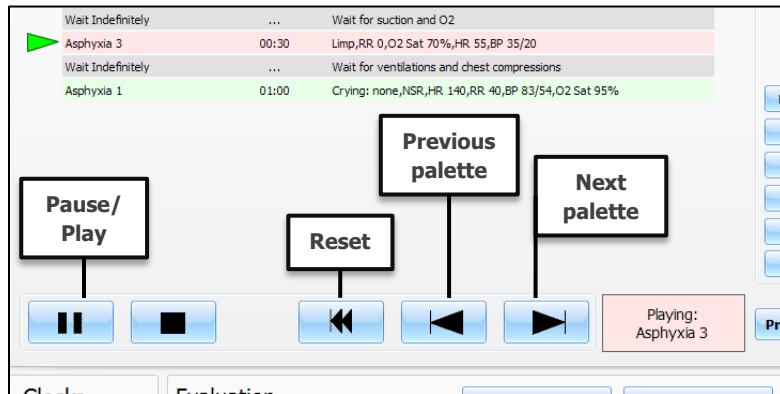
During the scenario, each vital signs palette updates the patient’s condition. As outlined previously, palette items are created using the Details tab.

The transition time trends over seconds or minutes the increase or decrease of numerical vital signs such as blood pressure.




Wait palettes do not update or change vital signs. Instead, wait palettes give the provider time to perform an action; this may be treatment in response to a complication or performing a standard assessment.

SCENARIO CONTROLS







Scenarios are controlled using the buttons at the bottom of the tab. The same way a music player plays songs, the scenario plays palette items. Intuitively, the facilitator can play, stop, pause, skip, or repeat items as necessary.



SCENARIO POSITION INDICATOR

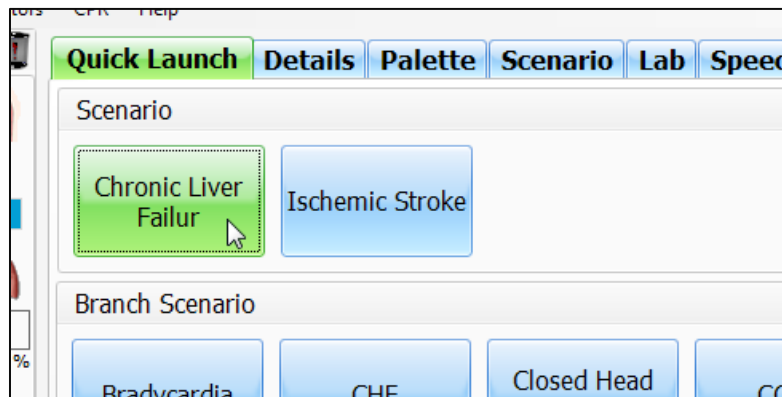
-  A blank triangle means that the scenario is stopped at the item indicated. Click the play button to start or continue the scenario..
-  A rapidly blinking triangle means that the scenario is playing the item indicated.
-  A slowly blinking triangle means that the scenario is paused at the item indicated.

SCENARIO PLAYER CONTROLS

-  Start or play the item to which the scenario position indicator is pointing. This button has two states: play or pause.
-  Pauses the scenario. This state of the play button is only active when the scenario is playing. It is disabled when a 'Wait indefinitely' item is playing because in such case the scenario is already paused.
-  The stop button has 2 behaviors depending on when it is clicked. When clicked once, the Stop button halts the scenario at the end of the currently playing item. When clicked a second time, the scenario is stopped immediately. For example, if the currently playing item has a transition of 1:00 minute and the Stop button is pressed when it has 0:10 seconds left, the scenario will be halted at the end the transition (i.e., in 10 seconds). If the Stop button is clicked again within those remaining 10 seconds, the scenario stops immediately.
-  The next button advances the progress indicator to the next item on the scenario. Click next when a wait indefinitely palette is playing to proceed to the next palette.
-  Similar to the Next button, the Previous button returns the indicator to the previous item in the scenario.
-  The Reset button stops the scenario immediately and returns the indicator to the first item in the scenario.

SCENARIO QUICK LAUNCH

Use the scenario Quick Launch tab to start a scenario with a single click. The Quick Launch tab displays all the scenarios saved in the current profile.



CREATING A NEW LINEAR SCENARIO

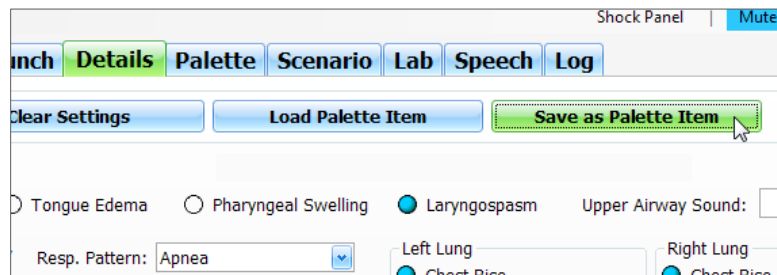
Build new scenarios to expand the number of exercises available in a training program. The general process of creating a new linear scenario is the following:

- Create a vital sign palette item for each state in the scenario
- Add the vital signs palettes and wait times to the scenario
- Play the scenario
- Modify and edit palettes
- Save the scenario

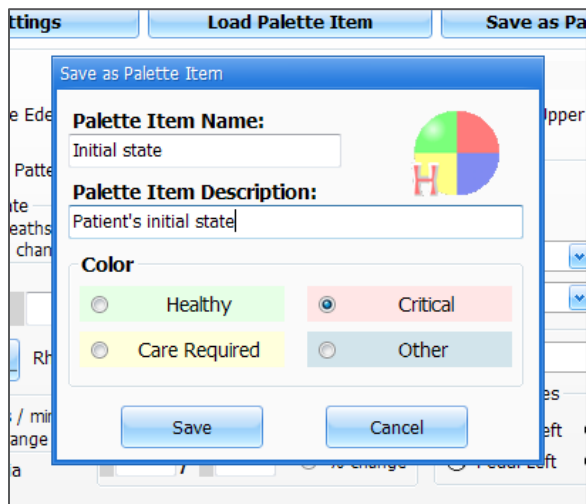
The first step is to create several vital sign palette items using the Details tab. Each palette item will represent a physiological state during the scenario. Remember to program the vital signs for the target state; the transition time trend the values.

Program the first vital signs palette item used as the scenario's starting point with values for all the physiological parameters, sound types, and volumes. This ensures that when the scenario begins no vital signs from a previous state will inadvertently carry on to the scenario exercise.

On the Details tab, enter the vital signs for the starting physiological state in the scenario and click the **Save as Palette Item** button.

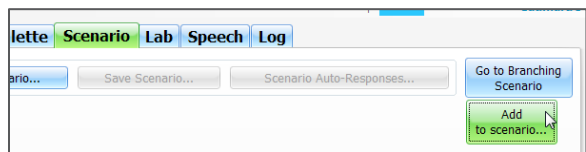


The “Save as Palette Item” dialog box is displayed. Type in the palette item name and a brief description; assign a color tag and click “Save”.

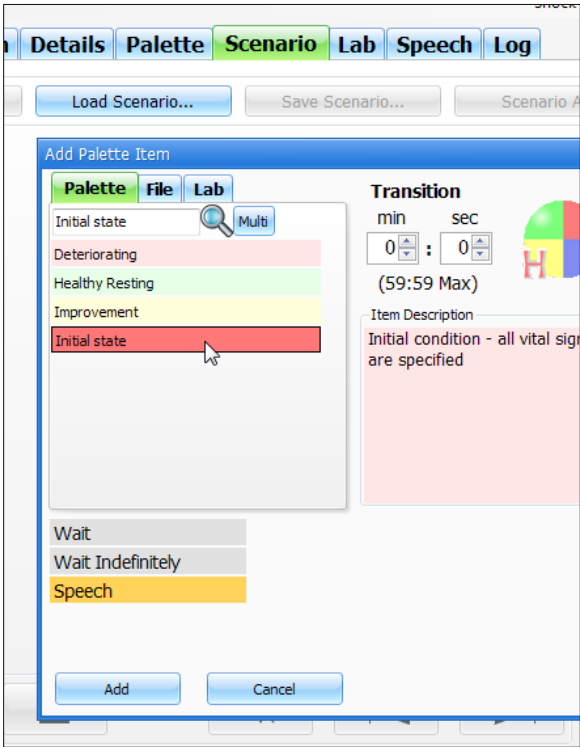


After the first palette is saved, create the next palette item by specifying only those vital sign parameters that are relevant to the second stage in the patient’s condition. Repeat this process to create palettes for the third and final stage in the scenario, only programming the values that require change.

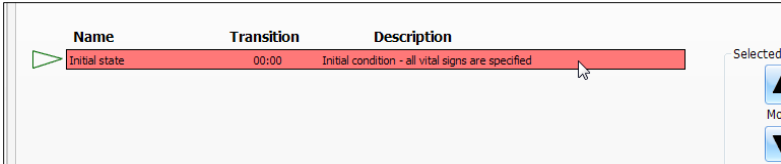
After all the vital sign palettes are created, go to the “Scenario” tab and click “Add to Scenario”.



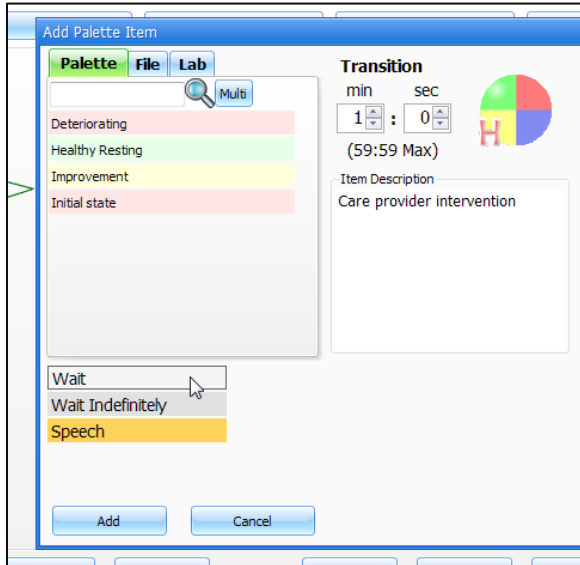
The Add Palette item menu is shown. From the list, select the vital sign palette previously programmed to be first state in the scenario. Enter 0min 0sec for the transition time so the initial vital signs are applied immediately. Click “Add” to add the palette to the scenario.



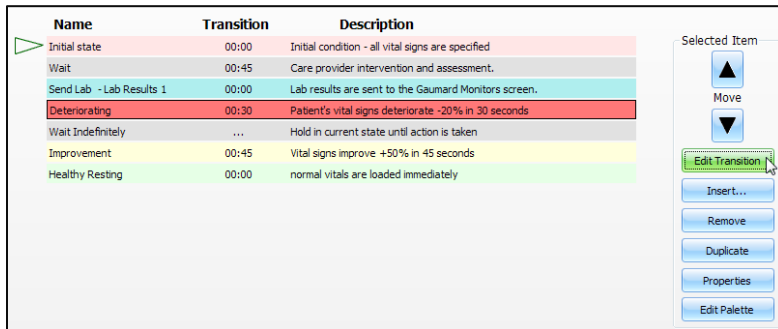
The first palette is now added. Click “Add Palette to Scenario” button again to add more vital sign palettes and wait palette items.



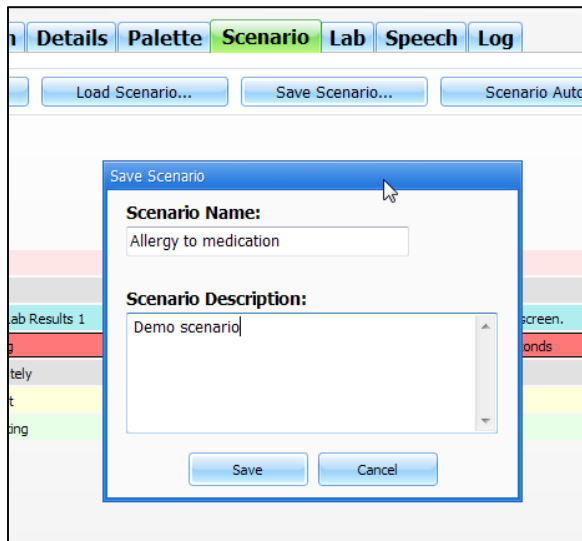
A “Wait” item maintains vital signs values steady for the transition time allotted. Insert a “wait” item after a vital signs palette to give the provider time to perform an action or an assessment. For example, auscultating blood pressure or gathering general information about the patient. After the transition time expires, the scenario will automatically move on to the next item. Alternatively, add “Wait Indefinitely” to hold the vital signs until the facilitator manually advances the scenario to the next item using the scenario controls.



After the palettes are loaded, use the “Selected Item” menu to edit the scenario items.



After the scenario is completed, click “Save Scenario” to store the scenario in the current profile for later use.



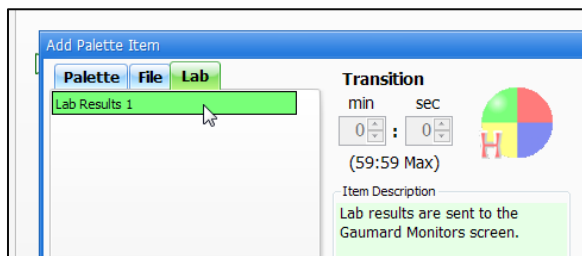
ADDITIONAL SCENARIO FEATURES

Incorporate the following features into a scenario for added realism.

- Auto responses – Automatically move onto the next palette item when electric therapy is detected.
- File sharing and lab reports – Send lab reports to the virtual monitor computer.
- Speech – add phrases or custom speech

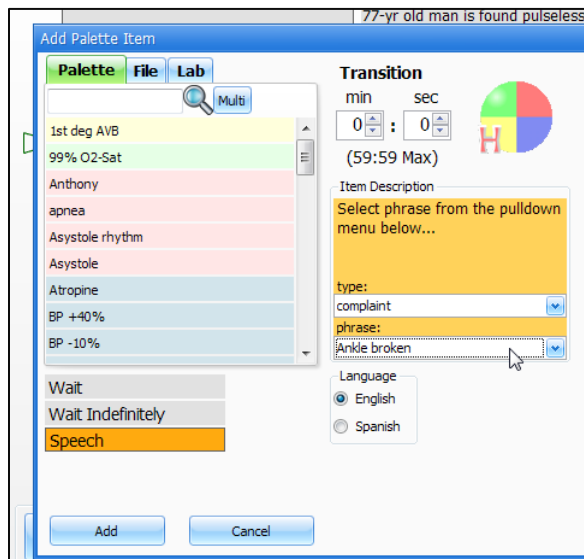
FILE SHARING AND LAB REPORTS

The scenario can also automate the distribution of shared files and labs. Click “Add to scenario”, and then use the “File” and “Lab” tabs to select from available documents. For more information making files available for file sharing, go to page 71. To create a new lab report, go to page 43.



SPEECH

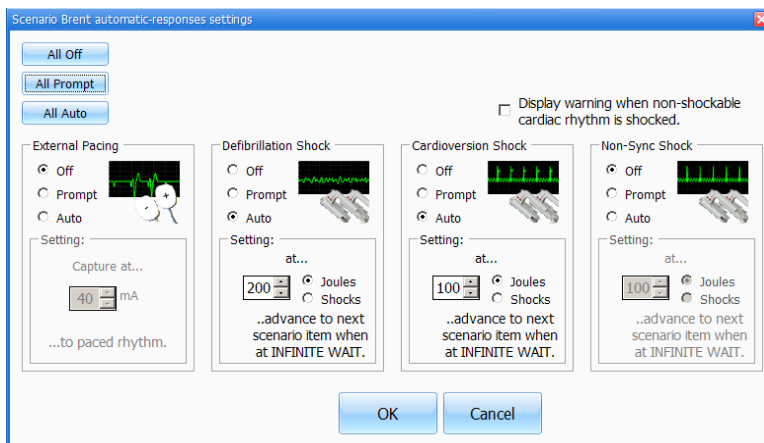
Add realism to a scenario by integrating speech into the scenario. Click the **Add to scenario** button and select **Speech**. Then, select the type of speech and phrase using the drop down menus.



AUTO RESPONSES

The scenario auto-response settings move the scenario to the next palette when electrical therapy is detected. Electrical therapy can be applied by the facilitator via Virtual Shock panel or by the care provider using real medical equipment if the simulator supports it.

Auto-responses advance to the next palette if the shock is applied while a “wait indefinitely” palette is being played and if the simulator’s state is a shockable rhythm.

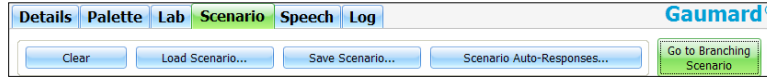


The three response options are defined below:

- **Off** - The scenario does not respond to the electric therapy.
- **Prompt** - The software detects the electrical therapy and prompts the user for approval before advancing to the next palette.
- **Auto** – Automatically advances to the next palette only if the electrical therapy meets the threshold specified.

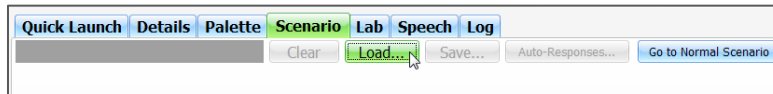
BRANCHING SCENARIOS

Unlike linear scenarios, which progress from one palette to the next, the interactive branching scenario controls allow the facilitator to change the scenario's trajectory in response to provider actions. To access the Branching window, click the "Go to Branching Scenario" button on the Scenario tab.



BRANCHING SCENARIO SCREEN

The top panel buttons are used to clear, load and save a scenario, or to switch from branching to linear scenarios. Click "Load Scenario" to access the preprogrammed branched scenarios in the Quick Start Profile.



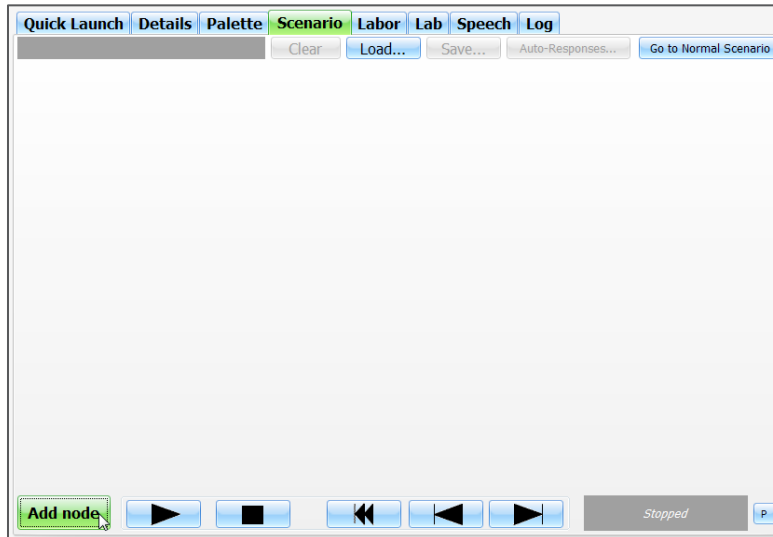
CREATING A NEW BRANCHING SCENARIO

The basic process of creating a new branching scenario is the following:

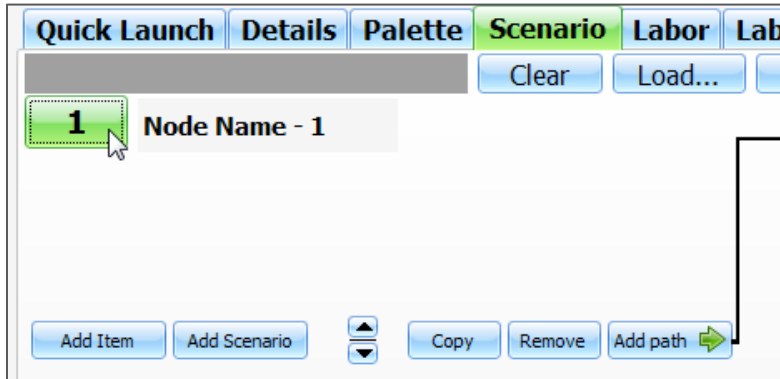
- Add nodes
- Add palettes or scenarios to each node
- Add paths to nodes that require provider action
- Create key events to alter the progress and trajectory of the nodes within the scenario

ADDING NODES

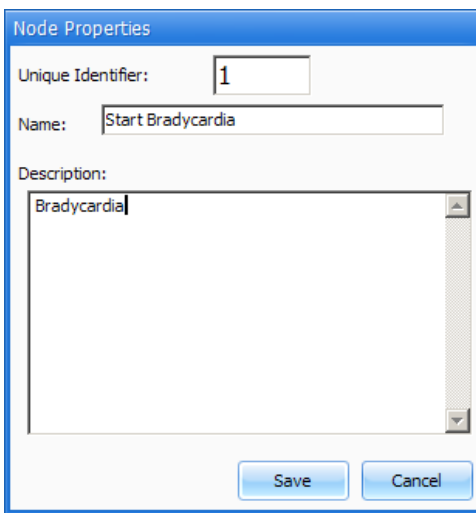
A branching scenario consists of several "Nodes". Each node is preconfigured to run a normal scenario or a series of palettes simulating a specific condition or effect. To add nodes, click the "Add node" button.



Click the node's identifier number to edit the node properties.

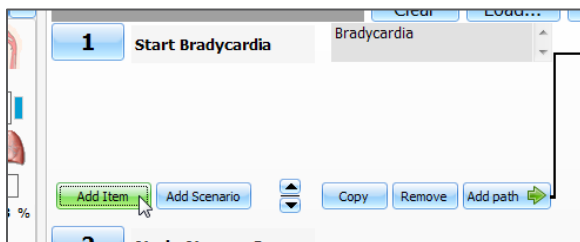


Enter a name for the node and description, then click “Save”.



ADDING PALETTES OR SCENARIOS TO A NODE

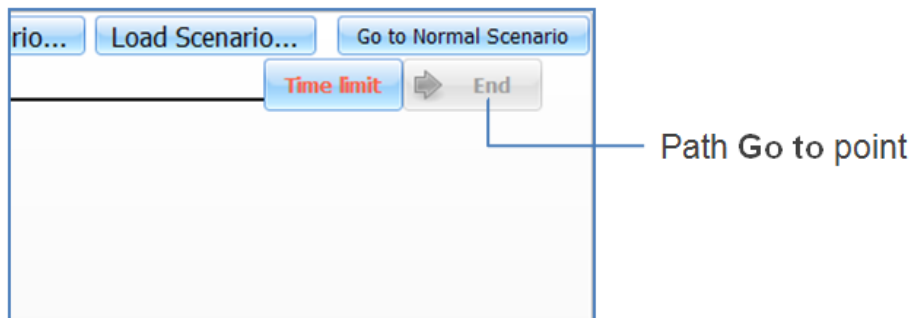
Click “Add Item” to add palette items or “Add Scenario” to add full scenarios to this node.



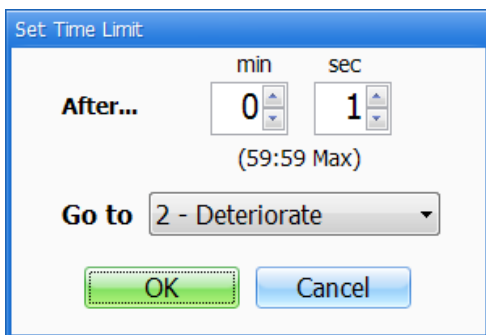
In this example, the following nodes are created: [1] Start Bradycardia, [2] Deteriorate, [3] Interventions, [4] Atropine, [5] Epinephrine, [6] Dopamine and [7] Pace. Each node is programmed with palettes that simulate the effect described.

ADDING PATHS

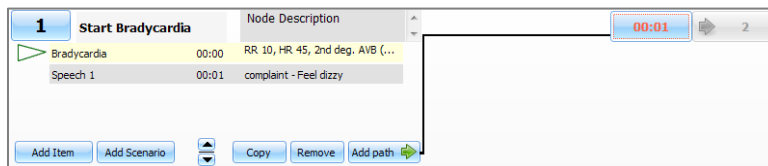
A path refers to the trajectory from one node to another after the last palette in a node expires. Click on the “Time Limit” icon to modify the “Go To” point for the default path.



Configure the countdown timer and the “go to” point for the default path. Click “OK” to save.

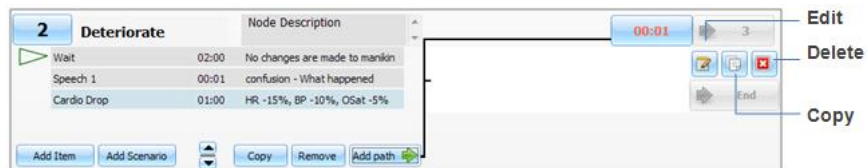


After the last palette expires, the scenario will move on to the node as indicated by the arrow. Node 1 is now configured to continue to Node 2 as indicated by the path's time limit.

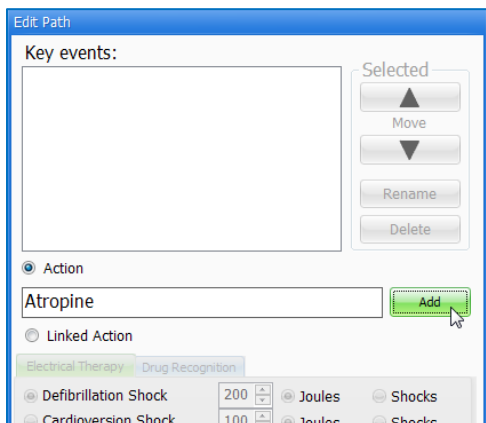


KEY EVENTS

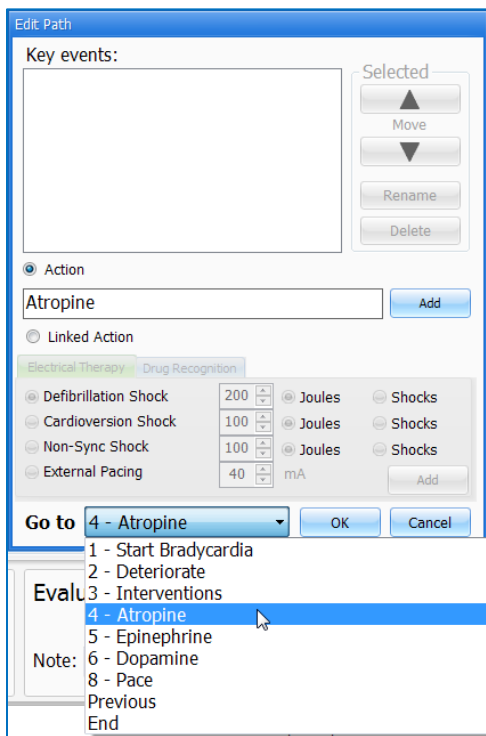
Key events allow the facilitator to select from multiple paths within a node to alter the trajectory of the scenario. To add a key event to a node, first click the “Add path” button to add an alternate path, and then click the key event “Edit” button.



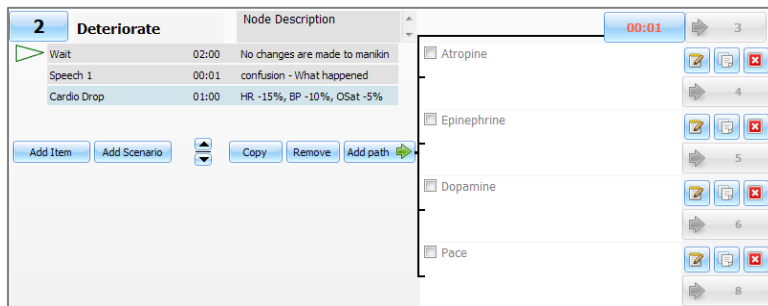
Use the Edit Path window to name, sort and create key events. First, type a name for the action, and then click “Add”.



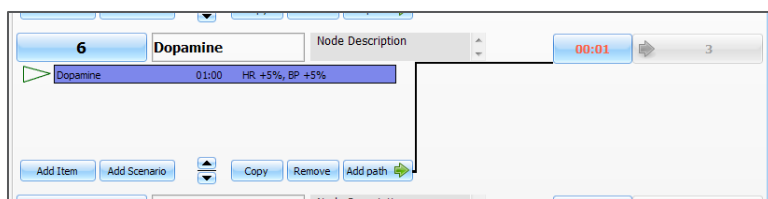
After the action is added to the Key Events list, assign the node that this action will move the scenario to using the “Go to” menu. Click “OK” to save changes.



In the example below, node 2 is configured with four alternate paths. Once the provider performs any one of the actions listed as key events, the facilitator will checkmark the key event to alter the trajectory of the node sequence.



If the provider administers Dopamine, the facilitator checkmarks the Dopamine key event to progress the scenario to node 6. Node 6 is programmed with the effects of the medication.



SAMPLE BRANCH SCENARIO DIAGRAM

Node	Node Name	Description		
1	Start bradycardia	Node vital signs palettes simulate bradycardia. Go to node 2.		
2	Deteriorate	Vital signs palettes deteriorate the patient's condition by -15%. Care provider has 4 options. Each option (key event) moves the scenario to the node specified. If no action is taken, the scenario will move to node 3 at the end of the time limit.		
		Key event		
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Atropine Node 4</td> <td style="text-align: center;">Epinephrine Node 5</td> <td style="text-align: center;">Dopamine Node 6</td> <td style="text-align: center;">Pace Node 7</td> </tr> </table>	Atropine Node 4	Epinephrine Node 5
Atropine Node 4	Epinephrine Node 5	Dopamine Node 6	Pace Node 7	
3	Intervention	Wait indefinitely, vital signs are on hold. Provider is to intervene again.		
		Key event		
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Atropine Node 4</td> <td style="text-align: center;">Epinephrine Node 5</td> <td style="text-align: center;">Dopamine Node 6</td> <td style="text-align: center;">Pace Node 7</td> </tr> </table>	Atropine Node 4	Epinephrine Node 5
Atropine Node 4	Epinephrine Node 5	Dopamine Node 6	Pace Node 7	
4	Atropine	Node vital signs palettes simulate the response to atropine. Time limit: Go to node 3 after 1 minute.		
5	Epinephrine	Node vital signs palettes simulate the response to epinephrine. Time limit: Go to node 3 after 1 minute.		
6	Dopamine	Node vital signs palettes simulate the response to dopamine. Time limit: Go to node 3 after 1 minute.		
7	Pace	Vital signs simulate the effect of pacing. Scenario ends.		

LINKED ACTIONS

A Linked action automatically triggers a key event when virtual electrical therapy is detected. To add a linked action, first open the Edit Path window.

Click the Linked Action radio button and select from Defibrillation Shock, Cardioversion Shock, Non-Sync Shock or External Pacing. Then, set the parameters for response to either joules or number of shocks.

Specify the “Go To” node the linked action will move the scenario to and click “Add” to insert the electrical therapy into the Key Events list. Click OK to save the changes. To apply electrical therapy, use the virtual shock panel

The screenshot shows a dialog box for configuring a linked action. At the top, there is a text input field and a "Delete" button. Below this, there are two radio buttons: "Action" (unselected) and "Linked Action" (selected). Under the "Linked Action" section, there is a text input field and an "Add" button. Below that, the "Electrical Therapy" section is highlighted in green. It contains four options, each with a radio button and a numeric input field:

- Defibrillation Shock: 8
- Cardioversion Shock: 4
- Non-Sync Shock: 4
- External Pacing: 40

For each option, there are two radio buttons to select the unit: "Joules" and "Shocks". For "External Pacing", the unit is "mA". An "Add" button is located to the right of the "External Pacing" row. At the bottom of the dialog, there is a "Go to" dropdown menu set to "End", and "OK" and "Cancel" buttons.

FACTORY PRESET SCENARIOS

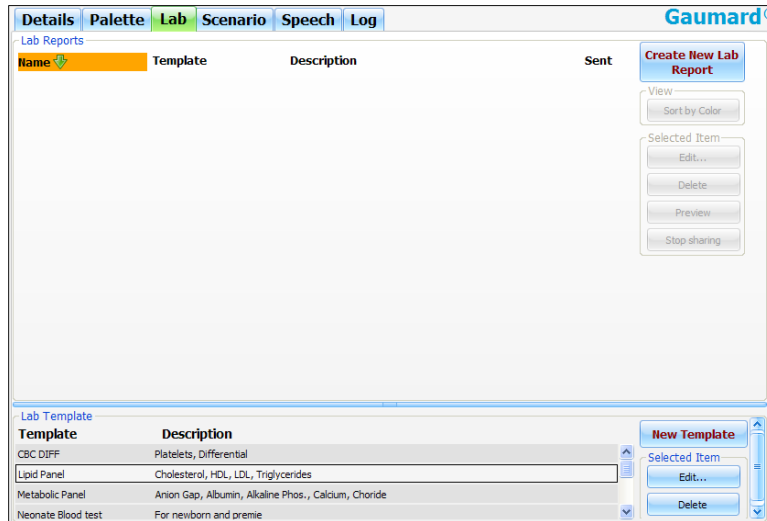
The factory-preset scenarios are found in the **Quick Start SUSIE profile**. Two of these scenarios are linear and nine are branching. Flowcharts for these scenarios are found in page 88.

Scenario Name	Scenario Description
Linear	
Chronic Liver Failure	Mrs. Gonzalez reported to her doctor's office with complaints of increasing weakness, poor appetite, and increasing abdominal distention that is making it harder to breathe. She has been producing dark-colored urine and notices a yellow discoloration of her eyes. Mrs. Gonzalez is a known alcoholic who has been hospitalized twice in the past few months for vomiting blood. She says that she has been unable to cut down on her drinking. She has a PMH of alcoholism for the past 20 years and associated complications including gastritis, alcoholic hepatitis, and aspiration pneumonia. Mrs. Gonzalez takes no medications and has no known allergies.
Ischemic Stroke	This 66 year old female was at home watching TV when she developed an onset of slurred speech. She was transported to the Emergency Department by EMS. A head CT scan confirmed she was suffering an acute ischemic stroke.
Branching	
Bradycardia	Note: for this scenario to function as intended the instructor should enable automatic pacing capture in the 'Setup → Auto-Responses' menu. An in-hospital patient is diagnosed with Bradycardia and requires immediate attention.
CHF	Wendy Morgan, 58 yo.
Closed Head Injury	<ul style="list-style-type: none"> - Perform a focused neurological assessment of a patient with closed head injury. - Perform serial neurological checks as ordered and record on the appropriate form. - Perform a complete pain assessment and reassessment. - Recognize agitation in a closed head injured patient and provide appropriate relief. - Report abnormal neurological findings to the physician. - Take verbal physician's orders and provide appropriate read-back of the orders.
COPD	A 74 year old female patient was admitted to the hospital yesterday for increased dyspnea and elevated mucus production. She looks thin and poorly nourished.
Pancreatitis	Jane Ellen, 45yo.
Pulseless Arrest	A young male was found unconscious.

Scenario Name	Scenario Description
SCI with paralysis	<p>Performs post-operative assessment of a client with spinal stabilization.</p> <p>Performs neurological assessment of a client with spinal cord injury resulting in paralysis.</p> <p>Performs complete pain assessment and reassessment as appropriate.</p> <p>Administers medication according to physician orders.</p> <p>Responses to opioid reaction by administering medication as ordered.</p> <p>Addresses and responds to questions the client asks regarding body image concerns.</p> <p>Performs administration of narcotics via a PCA pump.</p> <p>Administer medications via a multi-med line.</p>
STEMI	<p>Mrs Jones is 63 years old. Her son brought her to the ER because she is complaining about chest pain.</p>
Tachycardia - pulse	<p>SVT with pulses. Note: this scenario can progress directly to the Pulseless Arrest scenario. To do so, load "Pulseless Arrest" after stopping this scenario while on Node 2.</p>

Lab

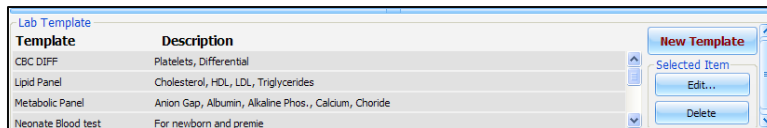
Laboratory tests are helpful tools for evaluating the health of a patient. To simulate this process, the Lab tab allows the facilitator to create laboratory tests to aid the provider during simulation. Any number of custom templates can be created to supplement many types of scenarios. In addition, the facilitator is in control of the results of each test. Once a laboratory test is prepared, the facilitator can send the results to the virtual monitor computer for the provider access during the exercise.



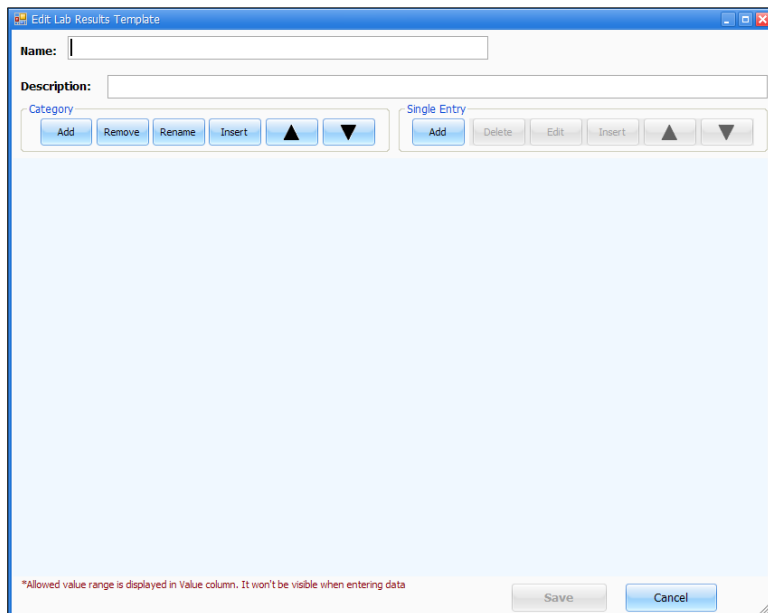
The Gaumard Virtual monitors must be connected before using the file sharing feature. To verify the connection, go to page 73.

CREATING A LAB TEMPLATE

To begin, navigate to the bottom of the tab and click on the **New Template** button on the right panel.

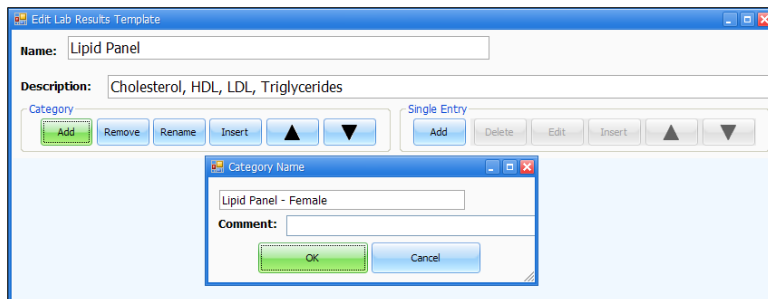


The **Edit Lab Results Template** window is used to create templates that will be later used to create lab reports.



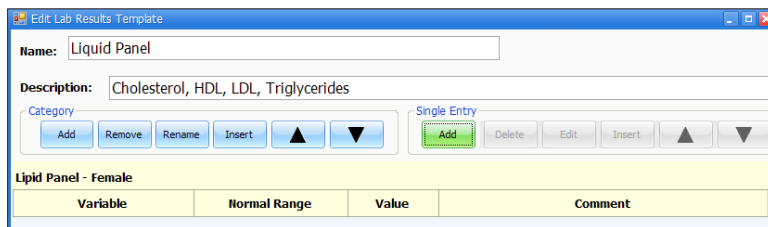
Enter a **name** for the lab template followed by a **description**.

Categories are used to group a series of tests in a lab report. From the “category” box, click **Add** to name and create a category.



Then, click **OK** to save the new category.

Use the **Single Entry** menu to add a test under the category previously created.



Use the **Add/Edit Entry** menu to customize the different parameters on a specific test. Begin by providing the name of the test, unit and decimal precision. The **Normal Range** will be displayed on the lab report for the provider to use as guide while reading the results. Meanwhile, the **Allowed Range** restricts the minimum and maximum value a facilitator can input as a test result. Once the test entry is configured, click **OK** to add the new test.

Repeat the process to add more tests and categories using the Category and Single Entry menu. Please note that individual items can be moved, deleted or modified after they are created. Click the “Save” button to create the new lab template.

Variable	Normal Range	Value	Comment
HDL Cholesterol(mg/dL)	35.00--85.00		
Cholesterol/HDL(Ratio)	0.00--4.40		

Variable	Normal Range	Value	Comment
HDL Cholesterol(mg/dL)	29.00--71.00		
Cholesterol/HDL Ratio(Ratio)	0.00--4.90		

Variable	Normal Range	Value	Comment
Cholesterol(mg/dL)	0.00--199.00		
LDL Cholesterol(mg/dL)	0.00--129.00		
Triglycerides(mg/dL)	30.00--200.00		

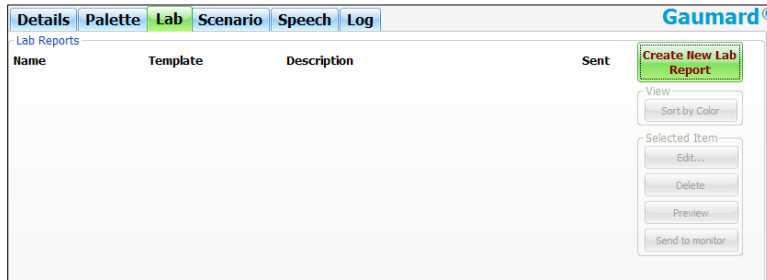
*Allowed value range is displayed in Value column. It won't be visible when entering data

Once a new format is created, it is listed on the “Lab Template” section at the bottom of the Lab tab. Use the buttons on the left panel to edit or delete lab templates.

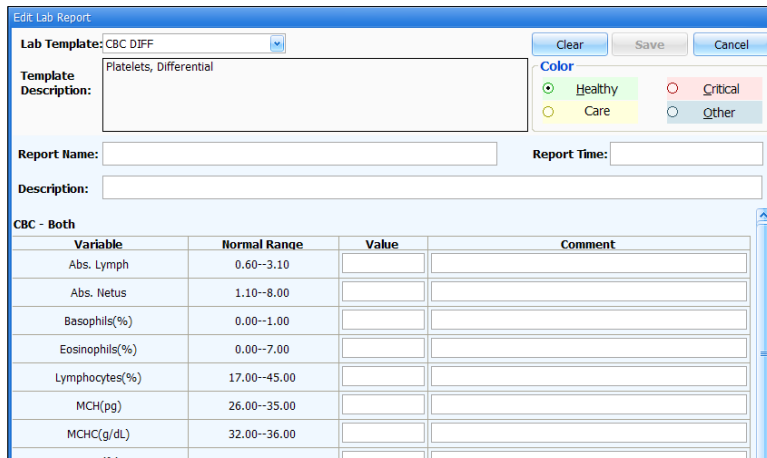
Template	Description
CBC DIFF	Platelets, Differential
Lipid Panel	Cholesterol, HDL, LDL, Triglycerides
Metabolic Panel	Anion Gap, Albumin, Alkaline Phos., Calcium, Chloride
Neonate Blood test	For newborn and premie

CREATING A LAB REPORT

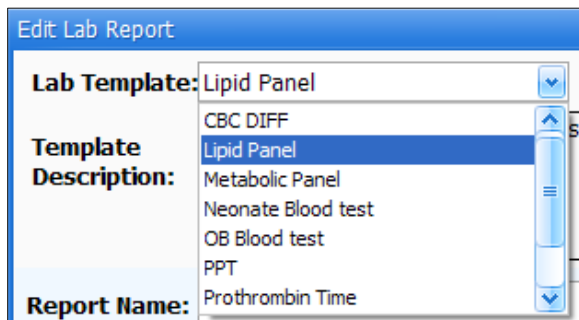
To begin, click on **Create a New Lab Report** from the right panel.



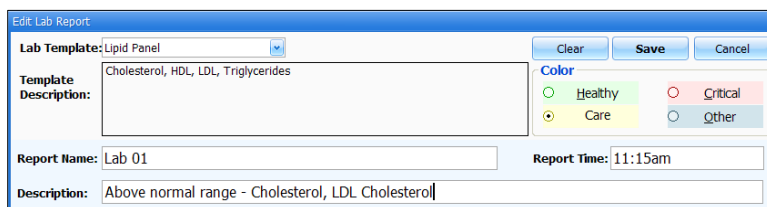
The **Edit Lab Report** window is used to prepare new lab report.



First, select a **Lab Template** from the drop down menu.



Provide a **Report Name**, **Report Time** and **Description**. In addition, select a condition color tag for the lab report on the right panel. Color tags aid the sorting of lab reports on the report list window.



Input the results of the tests on the **Value** column. Values above the normal range specified will be displayed in bold. Include any comments associated with the test performed. Finally, click **Save** from the top right menu to create the lab report.

Description: Above normal range - Cholesterol, LDL Cholesterol

Lipid Panel - Female			
Variable	Normal Range	Value	Comment
HDL Cholesterol(mg/dL)	35.00--85.00	85	
Cholesterol/HDL(Ratio)	0.00--4.40	5.1	Care required
Lipid Panel - Male			
Variable	Normal Range	Value	Comment
HDL Cholesterol(mg/dL)	29.00--71.00		
Cholesterol/HDL Ratio(Ratio)	0.00--4.90		
Lipid Panel - Both			
Variable	Normal Range	Value	Comment
Cholesterol(mg/dL)	0.00--199.00	190.00	
LDL Cholesterol(mg/dL)	0.00--129.00	135	
Triglycerides(mg/dL)	30.00--200.00	100	

The newly created lab report is now listed in the “Lab Reports” section. Sort lab reports by name, template, description, or color tag.

Details Palette Lab Scenario Speech Log Gaumard®

Lab Reports

Name	Template	Description	Sent
Healthy 2	OB Blood test	Healthy Levels	
Healthy	Neonate Blood test	Healthy Levels	
James	Metabolic Panel	Session 1	
Susan	Lipid Panel	Session 4	
Lab 01	Lipid Panel	Above normal range - Cholesterol, LDL Cholesterol	
Lab 04	CBC DIFF	Simulation 1	
Lab 02	CBC DIFF	High levels	
Lab 03	Neonate Blood test	High levels	
Lab 05	OB Blood test	Session 2	
Lab 06	PPT	Session 2	

Create New Lab Report

View

Sort by Color

Selected Item

Edit...

Delete

Preview

Send to monitor

On the right panel, click “Preview” to view final lab report on the facilitator’s screen. To make the lab report available to the provider on the patient monitor screen, click “Send to VM”.

Lab Preview

Send to VM Print Include patient info Close

Lab 01

Report Time: 11:36
Description: Above normal range - Cholesterol, LDL Cholesterol

Lipid Panel - Female			
Variable	Normal Range	Value	Comment
HDL Cholesterol(mg/dL)	35.00--85.00	85.00	
Cholesterol/HDL(Ratio)	0.00--4.40	5.10	Care required

Lipid Panel - Both			
Variable	Normal Range	Value	Comment
Cholesterol(mg/dL)	0.00--199.00	190.00	
LDL Cholesterol(mg/dL)	0.00--129.00	135.00	Care required
Triglycerides(mg/dL)	30.00--200.00	100.00	

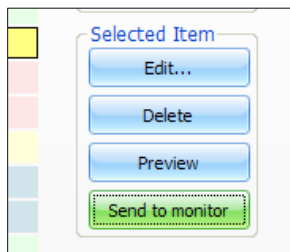
The preview window also allows the printing of results for distribution and archiving.

SEND TO MONITOR

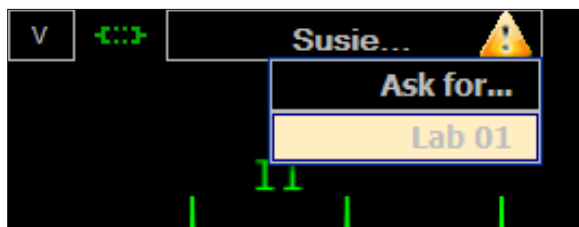
Send the completed lab report to the virtual monitor screen to assist the care provider. Begin by selecting the report from the lab reports list.

Name	Template	Description	Sent
Healthy 2	OB Blood test	Healthy Levels	
Healthy	Neonate Blood test	Healthy Levels	
James	Metabolic Panel	Session 1	
Lab 01	Lipid Panel	Above normal range - Cholesterol, LDL Cholesterol	
Lab 02	CBC DIFF	High levels	
Lab 03	Neonate Blood test	High levels	
Lab 04	CBC DIFF	Simulation 1	
Lab 05	OB Blood test	Session 2	
Lab 06	PPT	Session 2	
Susan	Lipid Panel	Session 4	

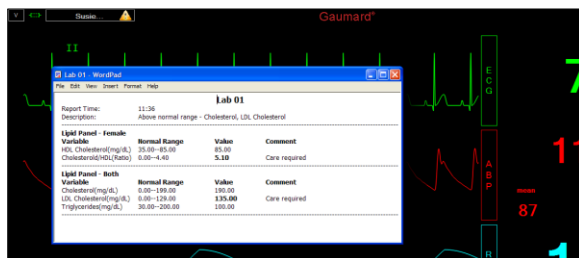
Click the **Send to Monitor** button to transfer the lab report to the virtual monitor.



On the virtual monitor window, an exclamation icon notifies the provider a file is ready for access. Click the SUSIE drop down menu to select the available lab report.



The lab report will open using the system's default application.



Once the report is sent, the letter Y will be present on the Sent column. Use the Stop Sharing button on the right panel to remove any items on the virtual monitors file list.

Name	Template	Description	Sent
Healthy 2	OB Blood test	Healthy Levels	Y
Healthy	Neonate Blood test	Healthy Levels	
James	Metabolic Panel	Session 1	Y
Lab 01	Lipid Panel	Above normal range - Cholesterol, LDL Cholesterol	Y
Lab 02	CBC DIFF	High levels	
Lab 03	Neonate Blood test	High levels	Y
Lab 04	CBC DIFF	Simulation 1	

An editable copy of the lab report is also copied onto the Gaumard_UI folder on the laptop's home screen. For information on how to access other files from the Gaumard Monitor screen, go to page 71.

Speech

PRERECORDED SOUNDS

Select the Speech tab to play back pre-recorded expressions. Click on the phrase button to have the simulator speak the phrase aloud. The collection of speech and other sounds was chosen to cover a wide range of simulated emergencies.



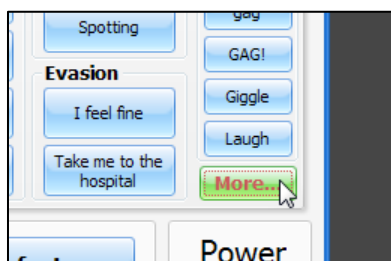
One benefit of prerecorded sounds are that they are consistent, so that providers' interpretation of SUSIE's speech is not colored by the variable quality of an actor's performance. Further, the facilitator need not spend time and resources casting and directing said actor.

For ease of use, SUSIE's expressions are divided into natural categories and laid out on a single page, all visible at once. The following list shows the exact phrase spoken by SUSIE after each button is clicked.

STREAMING AUDIO

Streaming audio feature allows the facilitator to carry out realistic dialogue exercises between the care provider and the simulator. Using the headset, the facilitator acts as the patient's voice, then listens to the provider's response. In addition, custom phrases can be recorded into GaumardUI and played back automatically during scenarios.

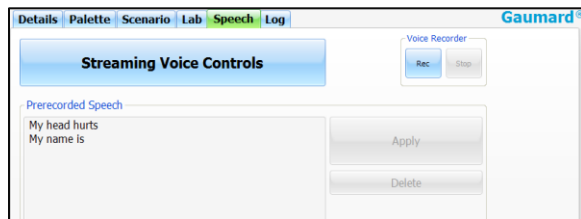
To access the streaming voice menu control, click the "More" button in the lower right corner of the "Speech" tab. Click the "More" button again to return to the prerecorded speech page.



If the "More" button is not displayed, please verify that the simulator is connected by serial number on the Setup> Options> Environment FIXED field.

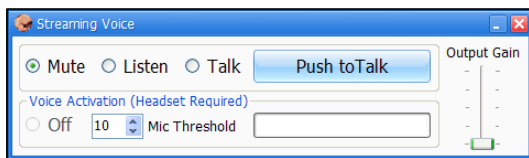
STREAMING VOICE CONTROL WINDOW

Click the “Streaming Voice Controls” button to open the streaming voice floating window.



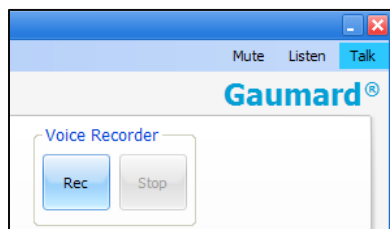
The streaming voice feature is a two-way “push-to-talk” communication. The communication controls are the following:

- Mute - Stop the communication
- Listen – Listen to the provider’s response.
- Talk - Speak to the providers as the simulator’s voice



Press the “Push to talk” button to speak while in the Listen mode. Alternatively, turn on the “Voice Activation” feature to have the system automatically switch to the talk mode when a voice is detected. The voice activation threshold can be adjustable. The “Mic Threshold” is used to adjust how sensitive the microphone is to the facilitator’s voice. The higher the threshold, the less sensitive the microphone is; and vice versa. For instance, if the threshold is set to high, users must speak loudly for the microphone to detect the audio.

In addition to the streaming voice control window, the Mute, Listen, and Talk buttons are located near the top of the screen.



It is recommended that the instructor uses a headset to improve sound quality. The headset also allows the user to use the “Voice Activation” so that at any time the instructor wishes to speak, it is sent directly to the simulator without user intervention.

The voice activation threshold can be adjusted. The “Mic Threshold” is used to adjust how sensitive the microphone is to the user’s voice. The higher the threshold, the less sensitive the microphone is; and vice versa. For instance, if the threshold is set to high, users must speak loudly for the microphone to detect the audio

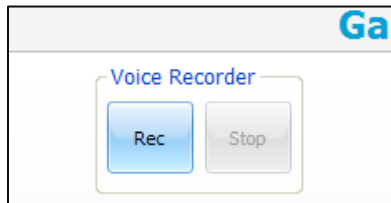
VOICE CLARITY

To achieve better clarity:

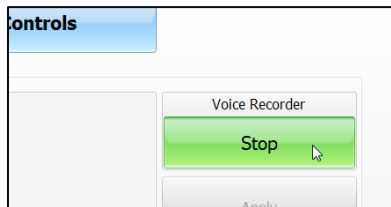
- Verify that the physical MIC control on your headset is set to high.
- Use the “Output Gain” to increase the microphone volume as a last resource. To raise the output gain in increments, tap and hold the control, then slide to the desired level.
- Enable “Microphone boost” from the Windows setting. To increase the microphone volume, go to page 105 in the Appendix.

VOICE RECORDER

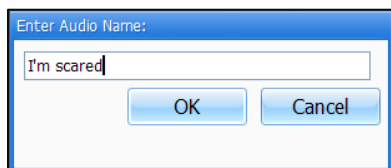
The instructor is able to record his/her own speech phrases at any time. Once the instructor clicks on the “Rec” button, the software automatically starts capturing everything that is said into the microphone.



Press “Stop” to finish recording.



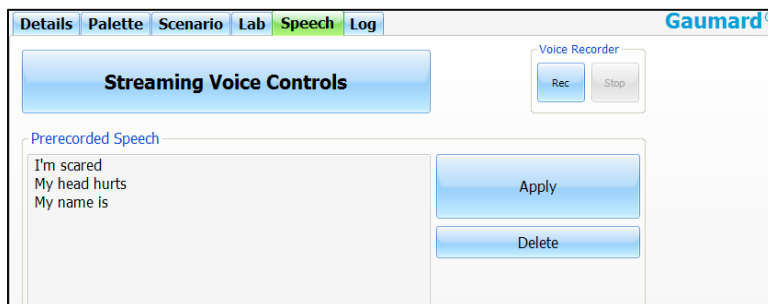
Enter a name and click “OK.”



The phrase will now be accessible under the “Prerecorded Speech” menu.

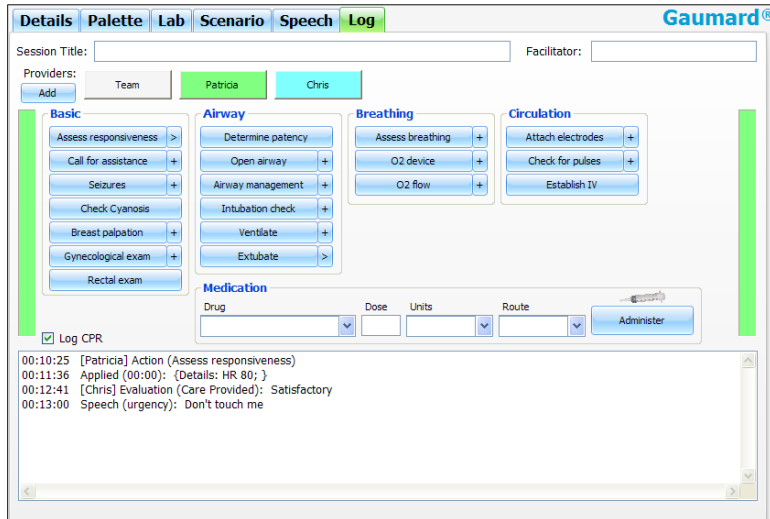
PRERECORDED SPEECH

On this section the instructor is able to play any of the custom phrases by either typing on the text box or clicking on the menu option. Once a phrase is selected, it can be played as the simulator’s voice or deleted.



Log

The Log page allows the facilitator to keep track of every event during a session. It automatically creates an entry whenever a detected event occurs as well as every time there is a change on the patient condition. In addition, the facilitator can log observed provider actions with a simple click.



The Log page consists of four different areas (from bottom to top): the text log, provider action buttons, team logging buttons, and session info.

TEXT LOG

This is the large panel at the bottom of the Log Page, containing all the time-stamped text entries. Every event in a session is recorded as an entry in the Text Log. The different types of entries are: Actions, Applied Changes, Detected Events, Evaluations, Speech, and Notes.

ACTIONS

Actions refers to those performed by one of the providers in the session. The facilitator can quickly log actions from the Provider Actions section and make the entry more specific using the Team Logging feature. The following is an example of an Action entry:

"00:00:14 [Patricia] Action (Assess responsiveness)"

APPLIED CHANGES

An "Applied" log entry occurs automatically every time there is a change to the physiological condition of the simulator. In other words, every time changes are made from the Details page, Palette page, or from a scenario, a log entry like the following is created:

"00:00:56 Applied (00:00): {Details: Rhythm 1st deg. AVB;}"

DETECTED EVENTS

Every time one of the various sensors in the simulator detects a provider action, it is automatically logged as a "Detected" entry. These actions include intubation, BP cuff placement, artificial ventilations, chest compressions, and electrical therapy (pacing, defibrillation, cardioversion, inappropriate shock). The following example shows an entry after a provider attempts to defibrillate:

"00:01:22 Detected (inappropriate shock): 300 Joules."

EVALUATIONS

Evaluations are added by the facilitator by clicking on the “Satisfactory” or “Unsatisfactory” buttons on the Evaluation panel. Team Logging allows the facilitator to evaluate individual providers with a single click. For example, if provider Chris did a correct procedure, the Evaluation entry would be:

"00:01:52 [Chris] Evaluation (Care Provided): Satisfactory"

SPEECH

When the facilitator makes SUSIE speak from the Speech page, an entry in the text log is automatically generated:

"00:2:04 Speech (Urgency): "Don't touch me"

NOTES

Notes can be entered directly from the Evaluation panel or by right-clicking on the text log and adding a note. The following is an example of a Note entry:

"00:02:23 Note: provider took too long to assess patient."

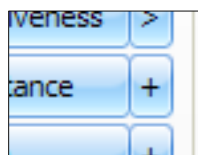
PROVIDER ACTIONS

The Provider Actions section refers to the collection of buttons in the middle of the page. It allows the facilitator to accurately keep track of provider actions. The buttons are grouped into five groups: Basic, Airway, Breathing, Circulation, and Medication. Anytime the facilitator clicks one of the buttons, a time-stamped log entry is generated with that particular action. For example, if the “Assess responsiveness” button is clicked when the session clock reads 00:07:24, the following entry is automatically generated:

"00:07:24 [Patricia] Action (Assess responsiveness)"

SPECIAL BUTTONS

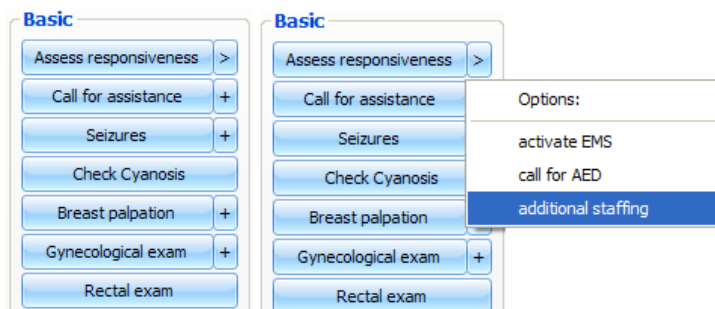
Some provider-action buttons are accompanied by a special option button.



The first special button, “ + “, lets the facilitator log actions in more detail. For example, if the button “Call for assistance” is clicked, the following entry is created:

"00:31:28 Action (Call for assistance)"

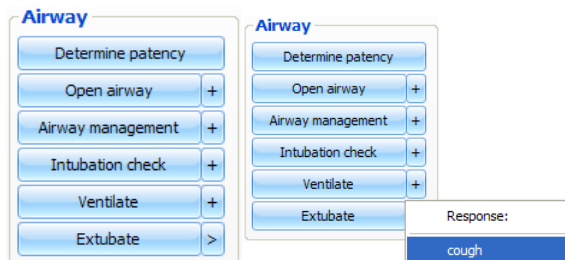
On the other hand, if the “ + “ button next to “Call for assistance” is clicked, a list of additional options appears. The facilitator can be more specific and choose one of the three options:



...and the following entry is added:

"00:31:58 Action (Call for assistance) additional staffing"

The second special button, “ > ”, allows pre-programming common responses to specific actions. Take a look at the example below:

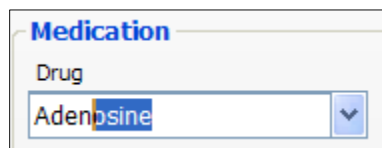


When the “extubate” button is clicked, the following entry is created:

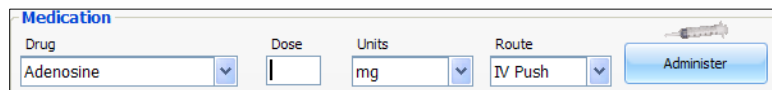
"00:35:26 Action (Extubate): cough"

MEDICATIONS

The Medications section allows for easy and fast logging of drugs administration, including dose and route. The software comes preloaded with a set of commonly used drugs. Each of these drugs has a default dose unit and a default route for administration (which can be overwritten by just typing over). For example, for Adenosine the default dose unit is "mg" and the default route is "IVP" (intravenous push). In order to enter, for example, that a provider administered 6 mg of adenosine via IVP, the facilitator just has to enter the text "ad" and the software automatically searches the drug list and displays the best match (if any).



After a drug has been selected, just clicking on the “dose” text field automatically fills the units and route fields with the default values for that particular drug.



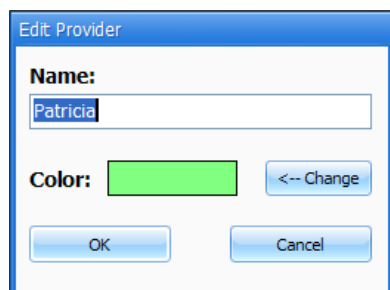
The facilitator then enters the dose and clicks on the “Administered” button and a log entry is created (let's say the dose entered was “6”):

"00:05:43 Action (Medication Administered): Adenosine, 6 mg, IVP"

TEAM LOGGING

The Team Logging feature allows the facilitator to designate which member of the team performed a particular action. The Team Logging section is right above the Provider Actions section on the Log page.

First, the facilitator should add all providers in the team, one by one, by clicking on the *Add* button and filling the *Add Provider* dialog box.



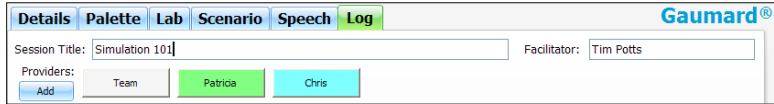
As shown in the Log Page image (at the beginning of this page), a colored button is inserted on the Team Logging region for the provider just added. There can be up to six different providers, each with a corresponding button. Every time one of the provider buttons is clicked, that person becomes the active provider. To indicate the active provider, the vertical bars on each side of the Log page will match the color chosen for that person. On the Log Page image, for example, the provider "Patricia" is the active provider, so the vertical bars are teal colored. While there is an active provider, every time a Provider Action or Evaluation log entry is created it will have the name of the provider as follows:

"00:07:41 [Patricia] Action (Check for pulses): radial"

To deactivate/deselect the active provider and return to general logging, click the *Team* button and the vertical bars will return to neutral color. All provider buttons can be edited or deleted by right-clicking them and selecting an option from the menu.

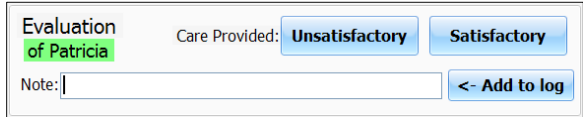
SESSION INFO

The session info area contains the "Session Title" and "Facilitator" fields at the top of the page. These fields are included when a report is saved or printed.

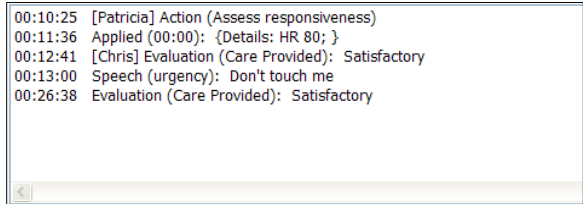


EVALUATION

The Evaluation panel, always visible at the bottom of the GUI window, allows the facilitator to insert standard evaluations or arbitrary notes into the log. The stylus device and handwriting recognition technology makes annotating in real-time very fast and convenient.



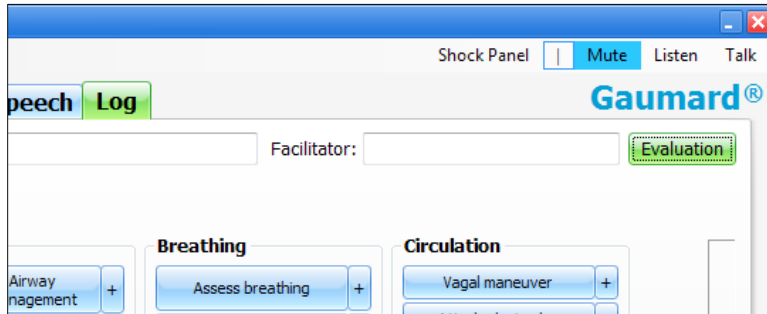
Standard evaluations are given context by their position in the log relative to detected and observed provider actions. The following example illustrates this idea.



The evaluation panel is part of the team-logging system, described previously. When a particular provider is selected, log entries generated via the Evaluation panel will be recorded with the provider's name. For more information on Team Logging, see the previous section of this guide on Logging.

Evaluation form

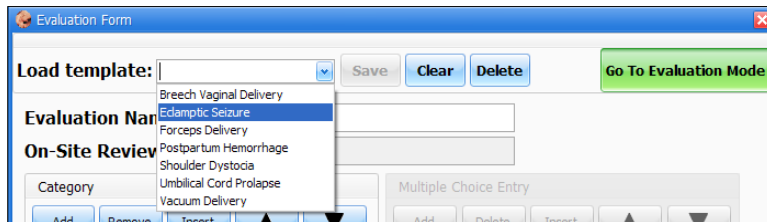
The evaluation tool assists facilitators in reporting and assessing provider interaction using a questionnaire form. A completed evaluation form can then be stored as a digital document or printed for distribution.



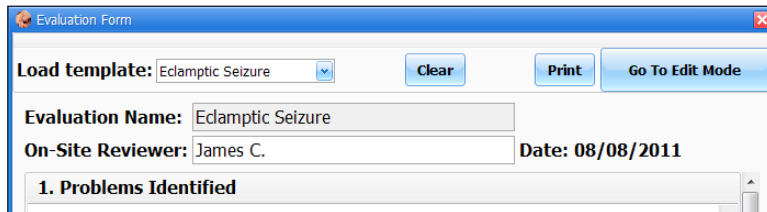
USING BUILT IN EVALUATION TEMPLATES

Several evaluation templates are built-in to GaumardUI's evaluation tool. Each template includes a set of multiple choice questions related to the type of assessment being performed.

To begin, select an evaluation template from the **Load Template** dropdown. New templates created in the edit mode will also be listed.



Enter the name of the facilitator performing the review in the **On-Site Reviewer** field.



Complete the form by first entering the written response in the “Problems Identified” field and selecting the applicable multiple choice responses throughout.

The screenshot shows a web-based form for an on-site review. At the top, it displays 'On-Site Reviewer: James C.' and 'Date: 08/08/2011'. The form is divided into two main sections:

- 1. Problems Identified:** A text area containing the entry 'Eclamptic Seizure'.
- 2. Provider Tasks and Performance:** A table with columns for 'Yes', 'No', and 'N/A'. Each row represents a task with radio buttons for selection.

	Yes	No	N/A
Calls for additional help (Nursing or Physician)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Calls for anesthesia.	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
Providers turn or assist in turning patient to side during seizure.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inserts tongue blade into mouth.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Places supplemental oxygen on patient.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Places pulse-oximeter on patient.	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

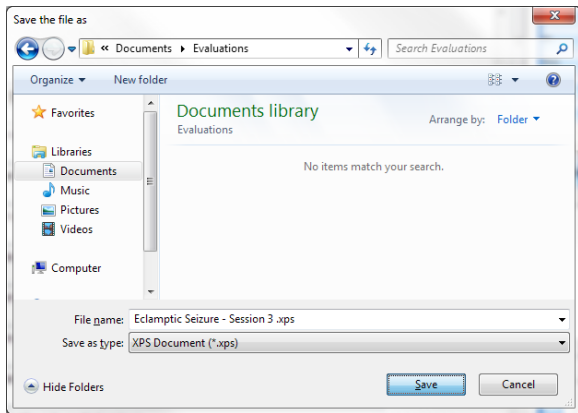
Once the evaluation is completed, click the **Print** button located at the top right corner of the screen.

This screenshot shows the top portion of the form interface. It includes a dropdown menu for 'plate:' set to 'Eclamptic Seizure', a 'Clear' button, a green 'Print' button, and a 'Go To Edit Mode' button. Below these are input fields for 'on Name: Eclamptic Seizure', 'Reviewer: James C.', and 'Date: 08/08/2011'.

To save the finished evaluation as digital document, select **Microsoft XPS Document writer** and click **Print**.

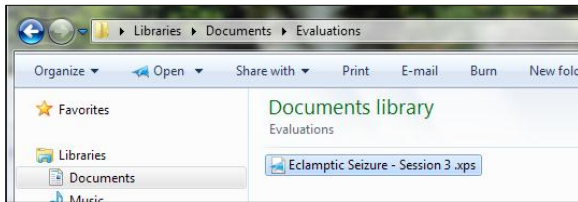
The screenshot shows the Windows 'Print' dialog box. The 'General' tab is active, and 'Microsoft XPS Document Writer' is selected in the 'Select Printer' list. The status is 'Ready'. The 'Page Range' section has 'All' selected. The 'Number of copies' is set to 1, and the 'Collate' checkbox is checked. At the bottom, there are 'Print', 'Cancel', and 'Apply' buttons.

Enter the name of the evaluation, select a location and click **Save**.

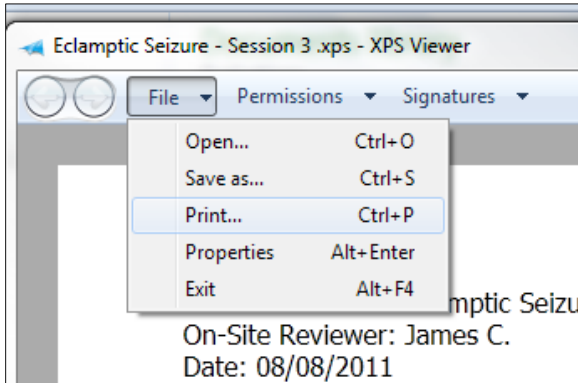


PRINTING AN EVALUATION

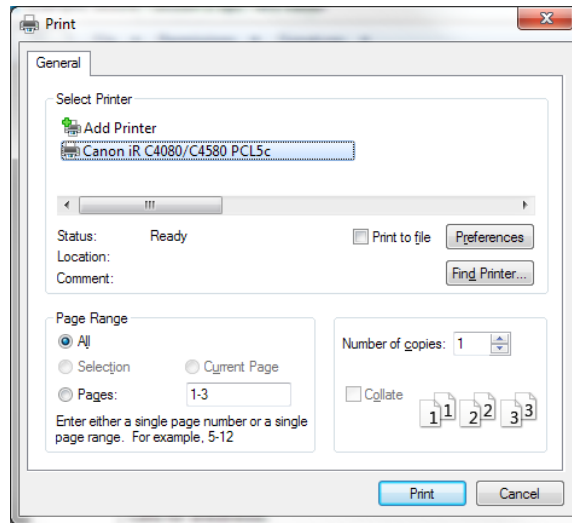
If the laptop is connected to a printer, first select and open the evaluation document saved in the previous step.



In the XPS Viewer, navigate to the file menu and select print.



Select the printer device from the list box and click print.

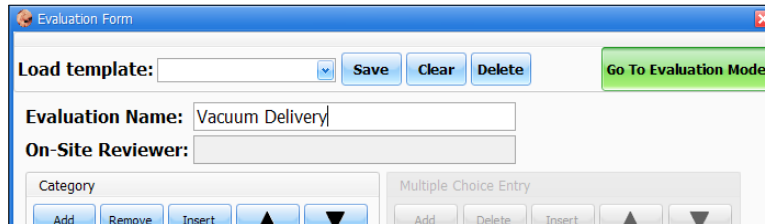


It is recommended that documents are first saved as XPS files before being printed into hard copies.

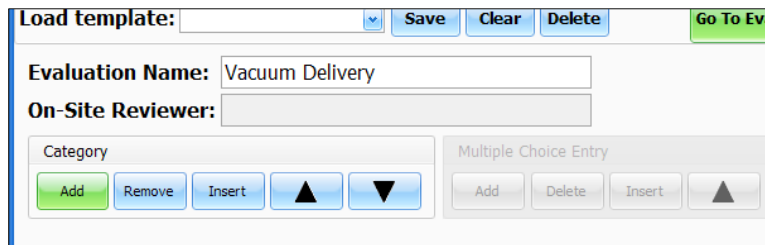
CREATING NEW EVALUATION TEMPLATES

Each evaluation is based on an evaluation template. Facilitators can create new evaluation templates to tailor specific assessment needs. Template design and creation is done in the evaluation form **edit mode**. To enter the edit mode, toggle the Go To button located on the top right of the evaluation form window.

In edit mode, enter the name of the evaluation template in the **Evaluation Name** field.



From the **Category** menu, click **Add**.



Select the **Question with answer region** category type and enter the category information title. To save the changes, click **OK**.

Category Options...

1. Select Category Type:

- Question with answer region.
- Multiple choice: Yes - No
- Multiple choice: Disagree - Neither Agree or Disagree - Agree
- Multiple choice: Unacceptable - Poor - Average - Good - Perfect

2. Category Information:

Problem Description

OK Cancel

The newly created category is shown.

Code template: Save Clear Delete GO TO EVALUATION MODE

Evaluation Name: Vacuum Delivery

On-Site Reviewer:

Category: Add Remove Insert ▲ ▼

Multiple Choice Entry: Add Delete Insert ▲ ▼

1. Problem description

Click, **Add** to include another category. Select the **Multiple choice** category type, enter the category information title and click **OK**.

Category Options...

1. Select Category Type:

- Question with answer region.
- Multiple choice: Yes - No
- Multiple choice: Disagree - Neither Agree or Disagree - Agree
- Multiple choice: Unacceptable - Poor - Average - Good - Perfect

2. Category Information:

Provider Tasks and performance

OK Cancel

Highlight the **Provider tasks and performance** category and then click **Add** from the **Multiple Choice Entry** menu.

Evaluation Name:

On-Site Reviewer:

Category: Add Remove Insert ▲ ▼

Multiple Choice Entry (2): Add Delete Insert ▲ ▼

1. Problem Description

2. Provider Tasks and performance

Yes No N/A

Enter the multiple choice information in the entry fields.

The screenshot shows the 'Multiple Choice Entry (2)' section of the evaluation form editor. It features two columns of controls: 'Category' with 'Add', 'Remove', 'Insert', and arrow buttons; and 'Multiple Choice Entry (2)' with 'Add', 'Delete', 'Insert', and arrow buttons. Below these are two sections:

- 1. Problem Description**: A large empty text area.
- 2. Provider Tasks and performance**: A table with columns for 'Yes', 'No', and 'N/A'. The first row is 'Physician/Provider introduces themselves to the patient.' The second row, 'Positions baby with neck slightly extended.', is highlighted in blue and has radio buttons selected under the 'Yes' column.

Repeat the previous steps to add more categories, questions and multiple choice options.

The screenshot shows the 'Multiple Choice Entry (2)' section of the evaluation form editor. It features two columns of controls: 'Category' with 'Add', 'Remove', 'Insert', and arrow buttons; and 'Multiple Choice Entry (2)' with 'Add', 'Delete', 'Insert', and arrow buttons. Below these are two sections:

- 5. Communication**: A table with columns for 'Unacceptable', 'Poor', 'Average', 'Good', 'Perfect', and 'N/A'. It contains five rows of rating questions: 'Overall Communication Rating', 'Orient new members (SBAR)', 'Transparent thinking', 'Directed communication', and 'Closed loop communication'. Each row has radio buttons for each rating level.
- 6. Situational Awareness**: A table with columns for 'Unacceptable', 'Poor', 'Average', 'Good', 'Perfect', and 'N/A'. It contains one row: 'Overall Situational Awareness Rating' with radio buttons for each rating level.

After the evaluation template design is complete, click **Save** at the top of the window.

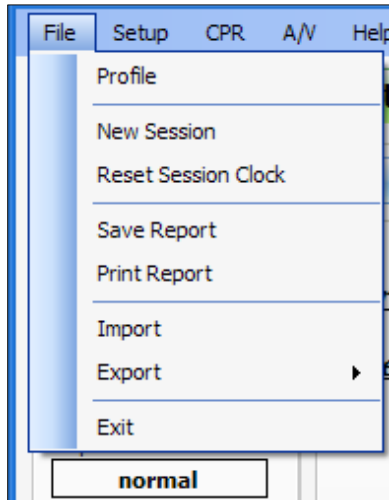
The screenshot shows the 'Evaluation Form' window. At the top, there is a 'Load template:' dropdown menu, followed by 'Save', 'Clear', and 'Delete' buttons. A green 'Go To Evaluation Mode' button is on the right. Below these are input fields for 'Evaluation Name: Vacuum Delivery' and 'On-Site Reviewer:'.

Finally, select the new template from the Load template drop down to use the completed evaluation form.

The screenshot shows the 'Evaluation Form' window with the 'Load template:' dropdown menu open. The menu lists several categories: 'Breech Vaginal Delivery', 'Edamptic Seizure', 'Forceps Delivery', 'Postpartum Hemorrhage', 'Shoulder Dystocia', 'Umbilical Cord Prolapse', and 'Vacuum Delivery'. The 'Vacuum Delivery' option is highlighted. The 'Save', 'Clear', 'Delete', and 'Go To Evaluation Mode' buttons are visible above the dropdown.

Menus

File



PROFILE

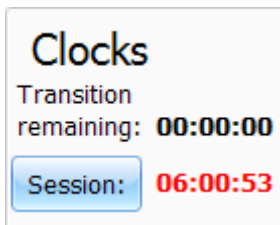
This option allows you to change your current profile. The profiles dialog box displays the available profiles. A software restart is not necessary to switch between profiles.

NEW SESSION

Clicking New Session in the file menu will:

- Clear any loaded/playing scenario
- Clear any loaded/playing palette
- Reset vital signs to normal values
- Clear out log page
- Restart the session clock.

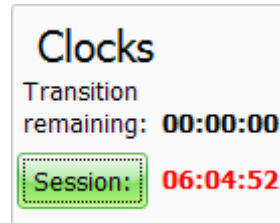
The session clock is located at the bottom of the dialog box.



The shortcut key for starting a new session is: **Ctrl + N**

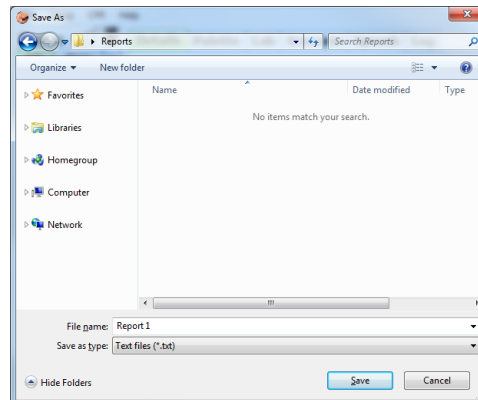
RESET SESSION CLOCK

Clicking on Reset Session Clock resets the clock back to zero. It does not have any effect on the transition time remaining on a scenario; it does not reset the vital signs, or clear out loaded scenarios. The facilitator can also reset the session clock by clicking on the Session button next to the session time.



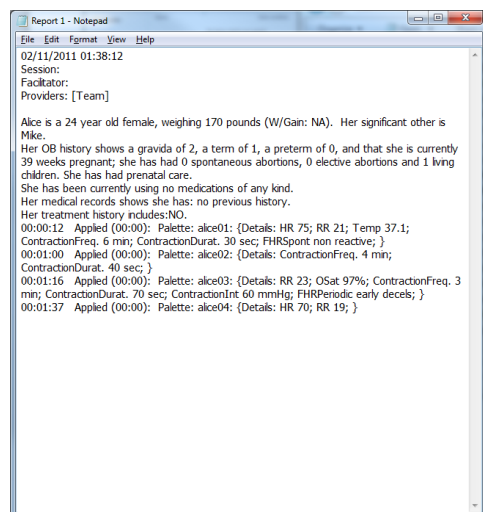
SAVE REPORT

This option allows you to save all the information recorded in the log page as a text file. Clicking on it brings up the “Save As” dialog box:



Select the desired name and path, and click “Save”.

The shortcut key for saving a report is Ctrl + S. For a sample report, look at the figure below:



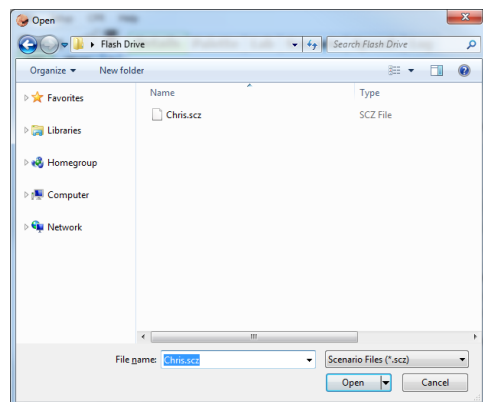
PRINT REPORT

This option allows you to print a text file containing all the information in the log for the latest session. Clicking on “Print Report” brings up the Print dialog box. The shortcut key for this option is **Ctrl + P**.

IMPORT

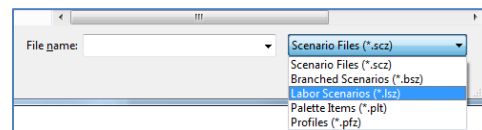
This tool allows the import of palettes, scenarios or modeling patients that may have been created on another laptop PC.

When Import is clicked, the “Open” dialog box is displayed:



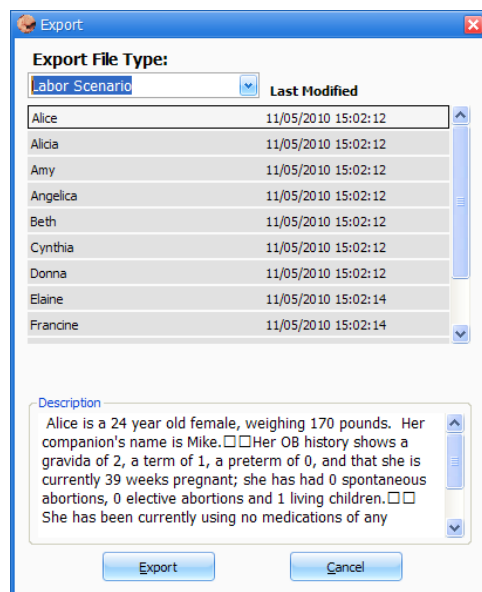
Browse to the location where the palette, scenario, or patient files were saved and open it. Imported files are automatically saved into the GaumardUI active profile.

Make sure that you have the correct file type selected:

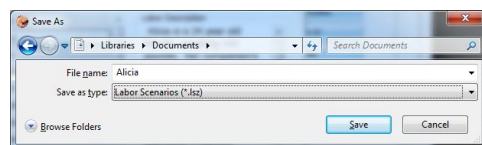


EXPORT

You can export palettes, scenarios (branched or linear), and model patients. After selecting the kind of file to be exported, the following dialog box is displayed.



Make a selection and click “Export”. The “Save As” window is then displayed.



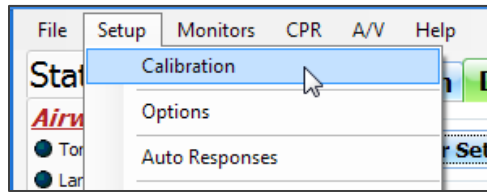
Once the files are saved on to the flash drive, plug the drive to the computer where the files will be imported. From the GaumardUI, select import from the file menu.

Navigate to the location where the file was saved on the flash drive and click open. GaumardUI will copy the scenario to the computer during the import process.

EXIT

Exit the software at any time by going to File, Exit or by clicking the red “x” button at the top right corner of the user interface.

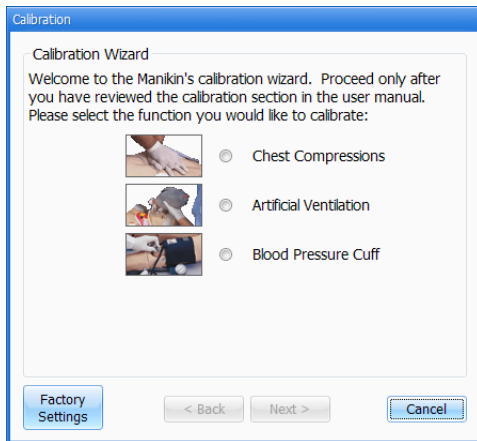
Set-up



CALIBRATION

Use the Calibration menu to calibrate the simulator's sensors. First select the feature to calibrate: chest compressions, artificial ventilations, or blood pressure cuff, then click "Next".

The Simulator will not breathe or have chest rise during any calibration procedure.

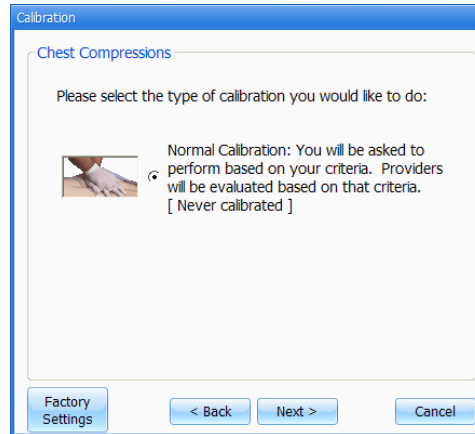


The procedures for each specific calibration are described in the sections below.

CHEST COMPRESSIONS/ARTIFICIAL VENTILATIONS

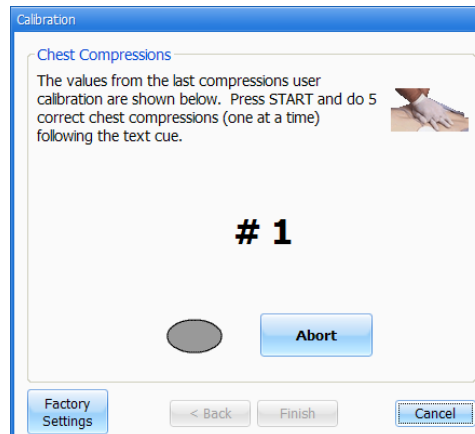
This tool helps you calibrate the chest compressions and the artificial ventilations to your specific criteria. That is, you will be telling the system what a correct chest compression is and/or what a correct artificial ventilation is. Providers will be evaluated by the system based on this criteria.

The chest compressions and ventilations are calibrated the same way. After making a selection, this dialog box is displayed:



Click next to proceed with the calibration.

The software will now ask you to perform a number of "correct" chest compressions or artificial ventilations, depending on what you are calibrating.



The facilitator should follow the text cue on the screen to perform just ONE compression or ventilation at a time, until prompted for the next one.

For example, if calibrating chest compressions:



The wizard prompts you with a "#1".

1. Perform one correct chest compression.
2. A green filled oval indicates that the chest compression was successfully recorded.
3. The wizard prompts you with "#2".
4. Perform a second correct chest compression.

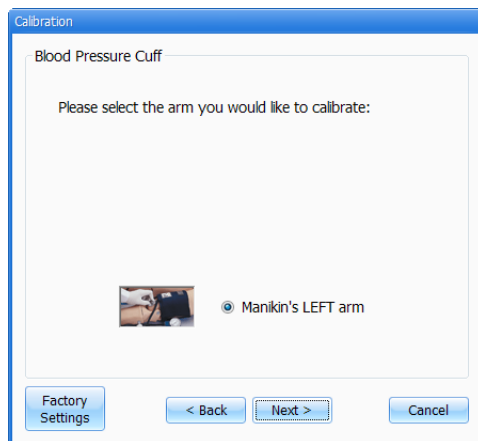
5. A green filled oval indicates that the chest compression was successfully recorded.
6. Continue the process.

At the end of the calibrating session, the wizard shows the average peak, depth, and duration values for the procedure. If you feel you performed the procedures correctly, click the "Save" button. Otherwise, press the "Back" button to repeat the calibration.

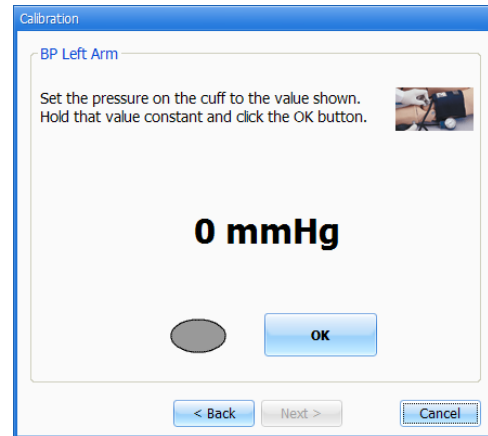
Notice that you can go back, abort or cancel at any time during the procedure.

BLOOD PRESSURE CUFF

Blood pressure cuff calibration should be performed only when the Korotkoff sounds do not match the systolic and diastolic values set from the computer. To calibrate, place the blood pressure cuff on the arm you wish to calibrate, right or left. Remember to connect the cuff's Luer-Lok connector to the simulator's shoulder.



Follow the prompt to set the BP cuff to the pressure indicated on the screen. Hold the pressure constant, and press the "OK" button. Follow the text cue on the screen and repeat the procedure for each pressure level until "Done" is displayed.



For example, if calibrating the left arm:



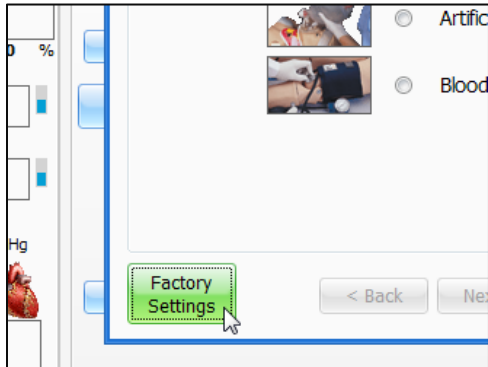
The wizard prompts you with "0 mmHg."

1. Set the pressure on the BP cuff to 0 (i.e. cuff valve open).
2. Click the "OK" button.
A green filled oval indicates that the value was successfully set.
3. The wizard then prompts you with "20 mmHg".
4. Set the pressure on the BP cuff to 20 mmHg.
5. Click the "OK" button.
A green filled oval indicates the value was successfully set.
6. Continue the process.

Once the prompt reads "Done", go back and calibrate another function or click the "Finish" button to close the calibration wizard.

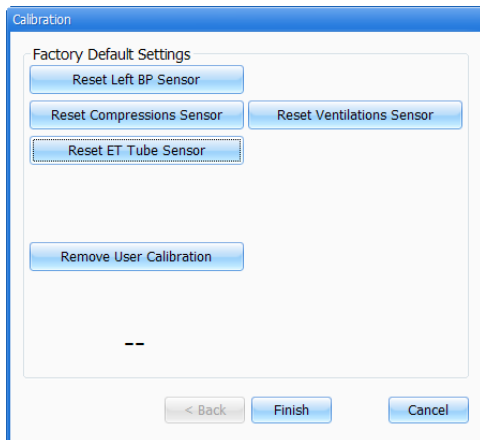
FACTORY SETTINGS

Factory Settings menu is used to restore sensors back to factory settings, over-riding any calibrations performed by users



Make sure that when you are restoring the sensors to the factory settings that no one is practicing chest compressions, ventilations, intubation or auscultating the blood pressure. Any of these actions may interfere with the sensor resets.

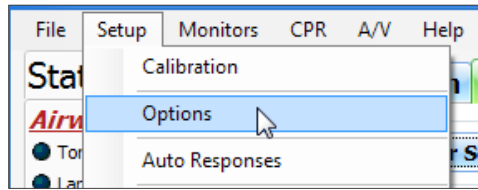
Each time a sensors is clicked, a message will appear at the bottom left of the screen notifying the user of the status of the reset (OK, or TRY AGAIN). Should the Sensor not respond, please refer to the troubleshooting guide or contact Technical Support.



At the end of calibrating a function, the Calibration Wizard resets the simulator for the changes to take effect and displays the message "Done". If the wizard displays the message "Can't reset", it simply means that the new calibration values will take effect next time you start the software. If the changes need to take immediate effect, simply close the GaumardUI software, wait about one minute (for the simulator to turn off), and then start the GaumardUI software again.

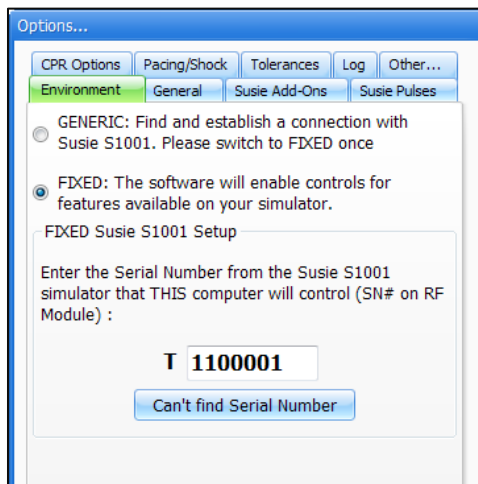
OPTIONS

Open the Options menu to enable and disable features, drop-down menus, and configure software behaviors.



ENVIRONMENT

This tab allows you to choose how many SUSIE's you have in your facility. Notice that if the "FIXED" button is selected, you must enter the correct simulator's serial number in the text box. If you cannot find the serial number try connecting to the SUSIE using "GENERIC" and then press on the button that says "Can't find Serial Number" and follow the instructions.



At the bottom of this tab, you can select the channel that the RF module will use to communicate with the simulator. It is recommended that the Auto Channel Change is active because it makes sure the initialization channel is always clear for other simulators to start up.

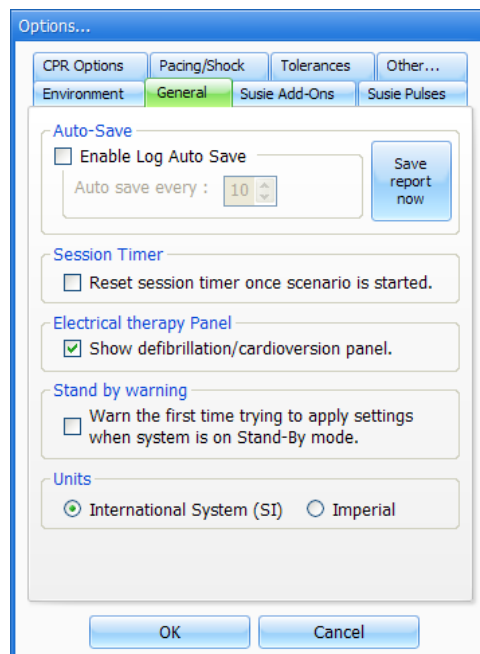
If you would like your simulator to always go to a clearer radio channel when possible, select the "Check noise in channel" button.

GENERAL

This tab allows the facilitator to:

- Enable auto saving of the log
- Save your current log report
- Enable stand-by warning
- Select units (SI or English)
- Enable electrical therapy shock panel

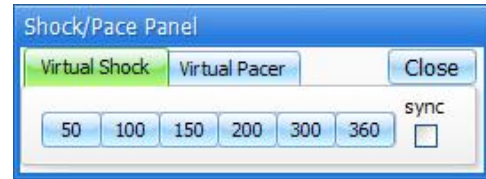
The shock panel is a floating window used for simulating electrical therapy. It can also be used in conjunction with "auto-responses". For more information, go to page 69.



If the Electrical therapy panel is enabled, a new control will be accessible from the top right of the screen



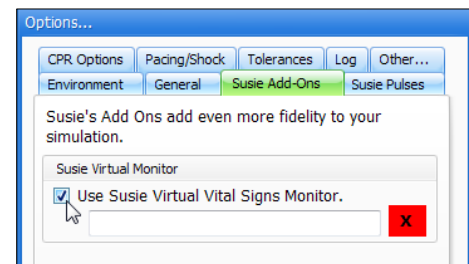
Use this control to bring focus to the floating shock/pace control window.



SUSIE ADD-ONS

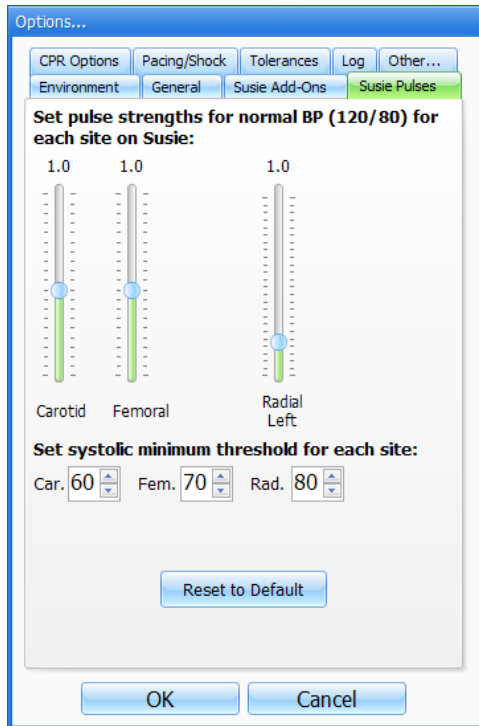
Enter the activation code to enable upgrade features. Activation codes are unique to the simulator's serial number. Before entering a code, go to the Environment tab and set the connection mode to FIXED, then enter the simulator's serial number.

Virtual Monitor – Enter the virtual monitor code to enable the virtual patient monitor screen on the extended monitor at startup. To enable the extended monitor screen, go to page 107.



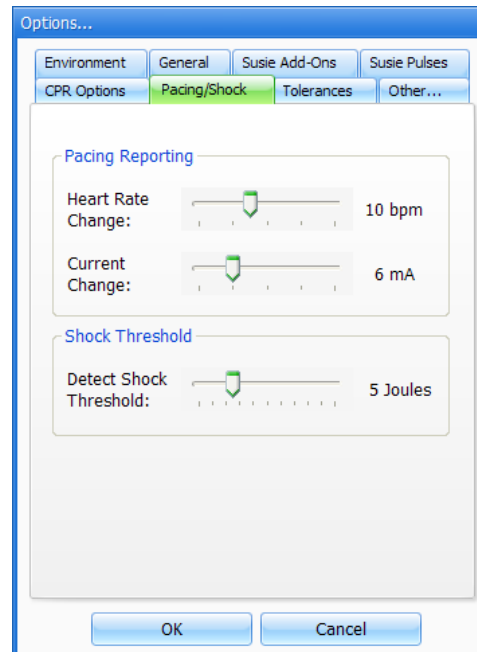
SUSIE PULSES

In this tab you can fine tune the pulse intensity for each desired pulse. The systolic minimum threshold represents the lowest value where the user can feel the pulse at each site.



PACING

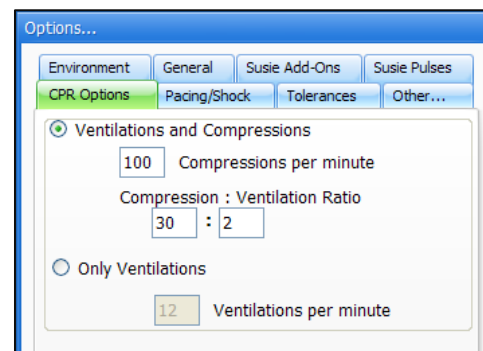
When SUSIE is paced; the pacers oscillate by a minimum fraction both on the heart rate and the current. This oscillation can make the software fire an event each time these small changes are captured. In this tab you can set a threshold for each parameter so that only changes greater than these settings will be taken into account by the software.



CPR OPTIONS

In this tab you can:

- Select the number of desired compressions per minute
- Specify the compression/ventilation ratio
- Select number of ventilations per minute (if the 'Only Ventilations' button is selected)

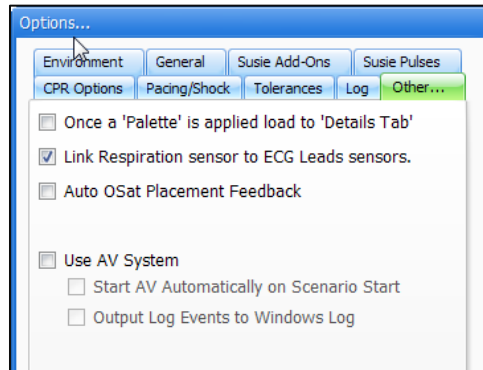


TOLERANCES

This Tolerances tab is used to adjust the tolerance and intensity of both chest compressions and ventilations.

OTHER

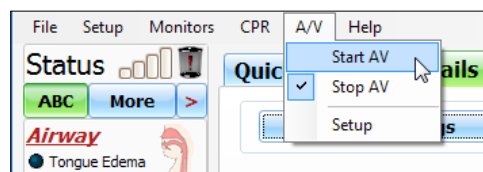
Checkmark "Once a 'Palette' is applied load to 'Details Tab'" to show the value of each of the palette's vital signs parameters on the Detail's tab control entries.



AV SYSTEM

GaumardUI is capable of interfacing with a number of third-party A/V recording systems. The A/V feature allows GaumardUI to send the event log information to a remote system that will interlace the event data with video. Checkmark the "Use AV System" to enable the AV setup option on the menu bar. For more information about the A/V menu, go to page 75.

Please consult with your A/V System's manufacturer for compatibility with Gaumard's Simulators prior to setting up the A/V Link Interface.

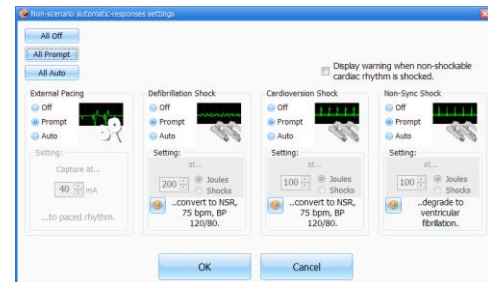


Because it is possible to extend a simulation session beyond the last step in a scenario, the "Stop Recording" message does not have an "automatically stop" option.

AUTO RESPONSES

The Non-Scenario Automatic Response feature allows the facilitator to set preprogrammed responses to electrical therapy events. When the electrical therapy is detected, auto-responses can automatically load a specific palette item or prompt the facilitator before making preprogrammed changes to the simulator's vital signs. Non-scenario response settings only detect electrical therapy administered when a scenario is not in progress. For information on how to configure auto-responses for scenarios, go to page 34.

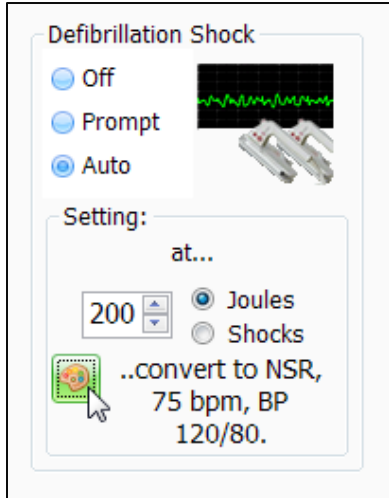
To activate the virtual shock panel, go to Setup>Options>General and checkmark "Show defibrillation/cardioversion/ pacer panel". The shock panel shortcut is now shown at the top right of the screen. For more information about the virtual shock panel, go to page 67.



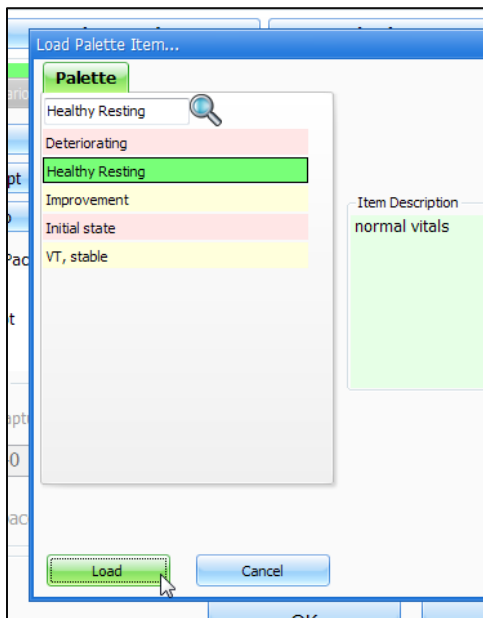
The behavior of each auto response option is explained below.

- Off - The software does not respond to the electric therapy
- Prompt - The software detects the electrical therapy and prompts the facilitator before applying the changes configured in the "Settings" section.
- Auto - The software automatically detects the electrical therapy and compares it to a threshold selected by the provider. If the threshold is met, the vitals will automatically change to the parameters specified on the "Settings" section.

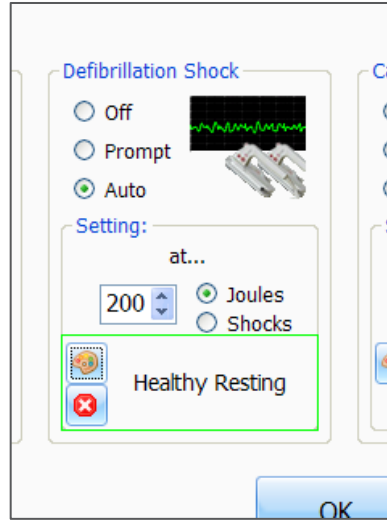
Each type of electrical therapy has a unique set of default parameters. For example, the default response to a Defibrillation Shock applies the following vital sign parameter changes: NSR, 75 bpm, BP 120/80. Click on the palette button to program a specific palette item as the auto-response.



The “Load Palette Item” window is displayed. Select the desired palette and click “Load”.



The desired palette is now displayed in the “Setting” section.

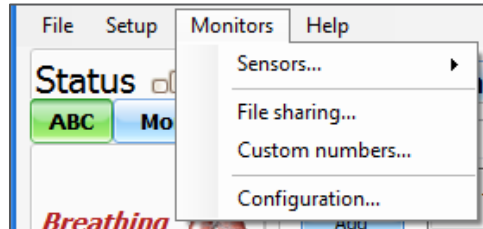


The auto-response is now configured to automatically apply the “Healthy Resting” palette if a Defibrillation shock of 200 Joules or greater is detected.

Due to the resistance created by the simulator’s materials, the energy registered by the simulator’s shock sites might be slightly less than that programmed on the medical device. If the Defibrillation shock is not detected, try lowering the threshold a few units.

Monitors

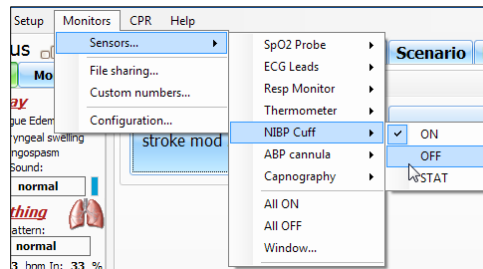
Use the Monitors drop down menu to enable/disable sensors on the virtual monitor screen, share files, program custom scalars, and verify the connection between the GaumardUI and Gaumard Virtual Monitor software.



If the “Monitors” drop down is not showing, go to Setup>Options> Add-ons, and checkmark “Use Virtual Vital Signs Monitor.”

SENSORS

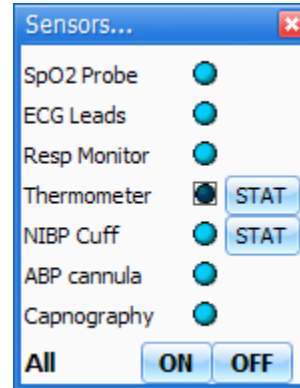
Use the sensors option to enable or disable any of the waveforms displayed in the vital signs monitor. Select the waveform and click “ON” to display the readings on the virtual monitor screen. To disable a parameter reading, click “OFF”. The vital signs monitor sensors defaults to “All On.”



Some sensors, such as NIBP and Thermometer are equipped with a STAT control that will allow the facilitator to activate readings on the virtual monitors from the controller software.

SENSOR CONTROL WINDOW

The sensor control window is a floating panel with on/off toggle controls. Click Monitors> Sensors> Window to open the floating sensor control panel.

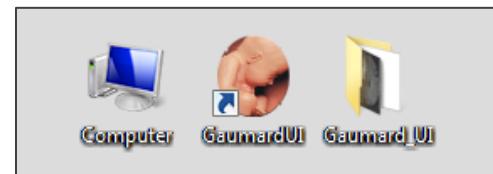


Single click the circular icon to enable or disable the sensors displayed on the virtual monitor screen. Click the circle dark to disable the sensor and light blue to re-enable it. In the example above, all the sensors are on except the thermometer.

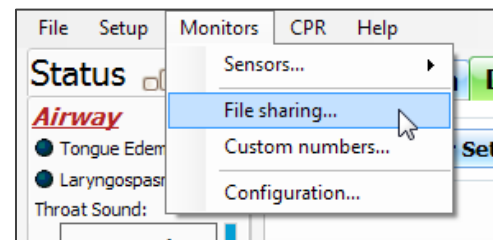
FILE SHARING

The file sharing menu allows the facilitator to send images, audio, and text files to the virtual monitor screen. Use the file sharing feature to fulfill file requests by the provider during simulation.

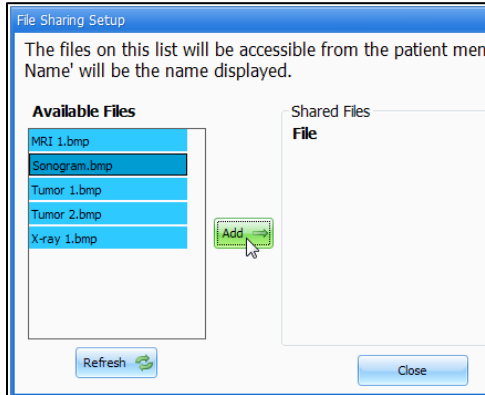
To begin, first add the mock image (.jpg, .bmp) or text files (.txt) into the Gaumar_UI folder located on the home screen of the control computer.



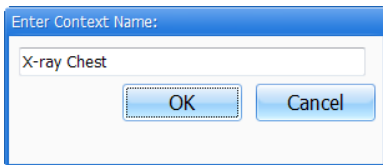
On the GaumardUI menu bar, click Monitors>File sharing, to open the “File Sharing Setup” menu.



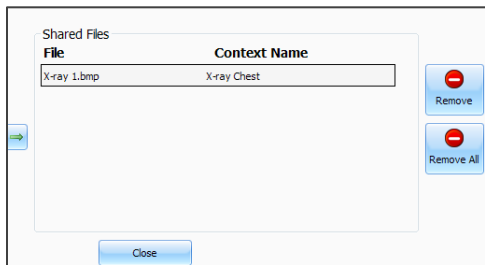
The “File Sharing Setup” menu is used to manage files shared with the virtual monitor software. The list of files stored on the Gaumard_UI folder available for sharing is displayed on the left panel. To share a file, first select the file from the left panel and click the “Add” button.



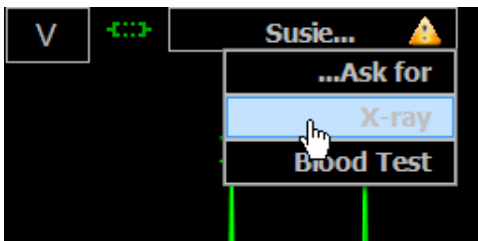
Enter a context name on the pop-up menu and click “OK” to share.



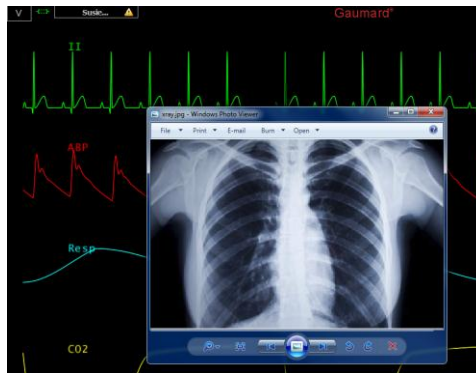
Files currently shared are listed on the “Shared Files” list.



Once a file is added to the “Shared Files” list, a yellow notification icon is shown on the patient menu at the top left of the virtual monitor screen. The icon notifies the provider that a file is available for viewing. Click on the patient name button to bring down the context of available files and select the context name to open.



The x-ray file is now open.

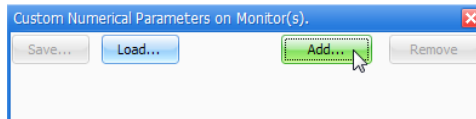


To troubleshoot file sharing access errors go to page 102.

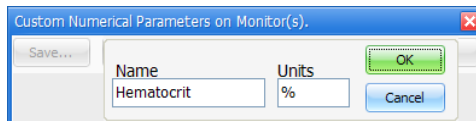
CUSTOM NUMBERS

Use the custom numbers menu to add custom numerical parameters to the virtual monitor main screen, such as a glucose levels or a platelet count.

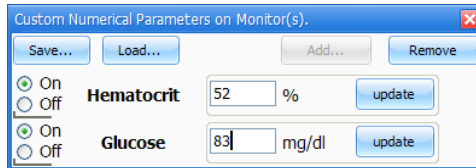
On the GaumardUI menu bar, click Monitors>Custom Numbers, to open the “Custom Numerical Parameters on Monitor” menu. Click the “Add” button to create a new parameter.



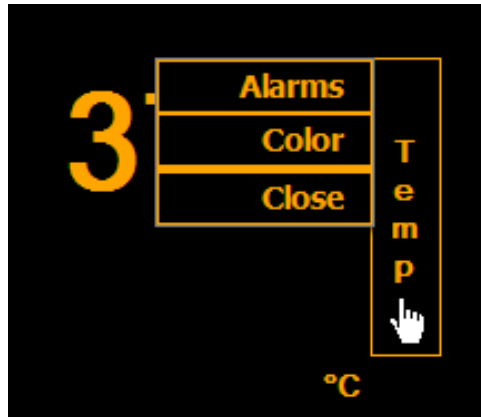
Type the name and units of the new parameter and then click “OK”.



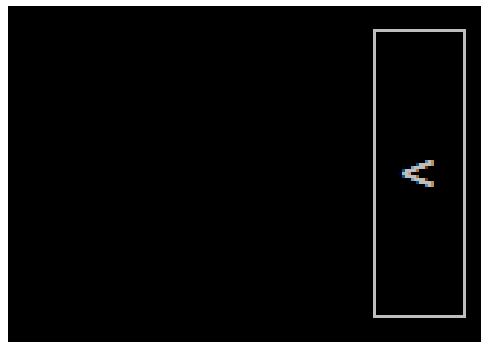
The scalar parameter is now created. Enter a value for the parameter and click “Update”.



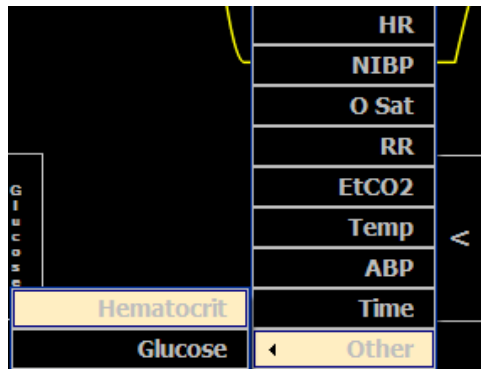
On the virtual monitor screen, click on a scalar's menu and select "Close" to make the entry available for the custom parameter.



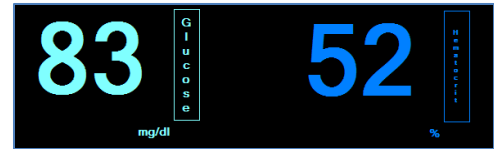
The scalar entry is now a blank field.



Click on the empty scalar menu and select "Other" from the list of available scalar parameters. Select the name of the custom parameter.

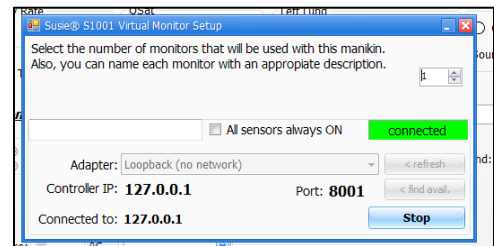


The figure below shows two new values: Glucose level and hematocrit levels. Return to the custom parameter menu on the GaumardUI software to update the values when necessary.



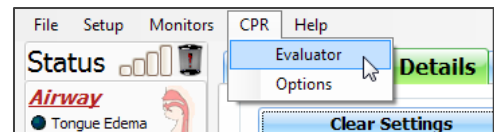
CONFIGURATION

On the GaumardUI menu bar, click Monitors>Configuration, to open the virtual monitor setup window. Use the virtual monitor setup window to verify the connection between the GaumardUI software and the Gaumard Monitors vital signs software, re-configure the communication ports and view the controller IP address. To troubleshoot connectivity issues, go to page 102.

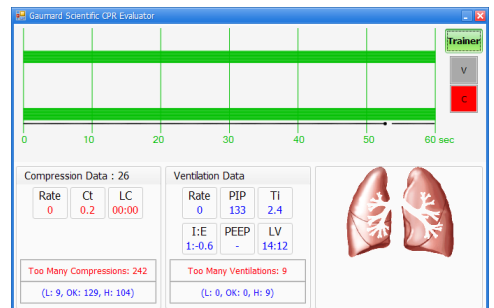


CPR

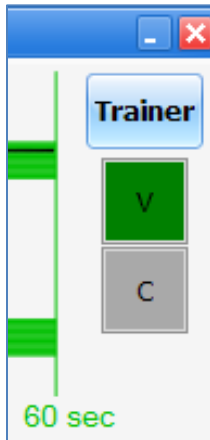
GaumardUI features a CPR performance evaluator and trainer. On the menu bar, click CPR>Evaluator to access the CPR Evaluator window.



The CPR evaluator feature provides real time feedback on the provider's compression and ventilation performance.

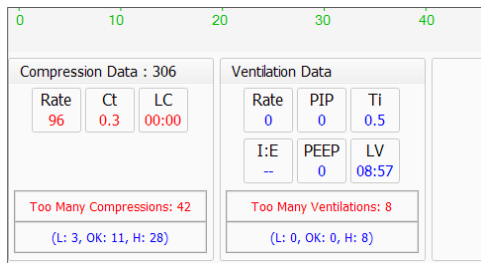


The provider performance indicator boxes are located on the right. The V (ventilation) and C (compression) box fill color changes between the following states:



- **Grey** – No intervention was detected.
- **Yellow** – Compression was too shallow. Ventilation was too weak.
- **Green** – Compression/ventilation was performed correctly.
- **Red** – Compression was too deep. Ventilation was too strong.

Compression and ventilation data is displayed at the bottom of the window as CPR is performed by the provider.



Compression Data

- **Rate** – Rate of compressions in real time.
- **Ct** – (Compression time) – Average length of each compression in seconds.
- **LC** – (Last Compression) – Time elapsed since the last compression performed.

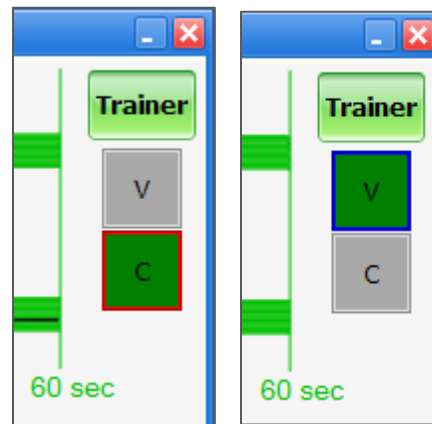
Ventilation Data

- **Rate** – Ventilation rate in real time.
- **PIP** – (approx.) Peak Inspiratory Pressure
- **Ti** – Time Inspiration

- **I:E** – Inspiratory: Expiratory Ratio
- **PEEP** – (approx.) Positive end-expiratory pressure
- **LV** – (Last Ventilation) – Time elapsed since the last ventilation performed.

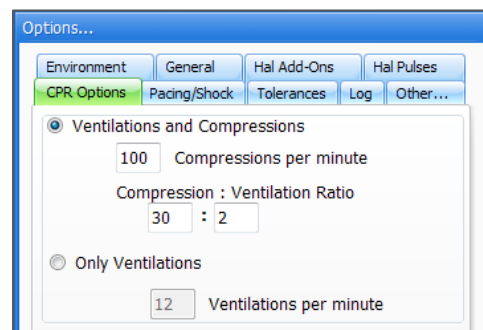
TRAINER

The CPR trainer reference boxes generate a visual prompt of the compression to ventilation ratio programmed in the “CPR Options” menu. Click the “Trainer” button to start. The V (ventilations) and C (compressions) box borders blink to indicate the correct reference CPR rate.



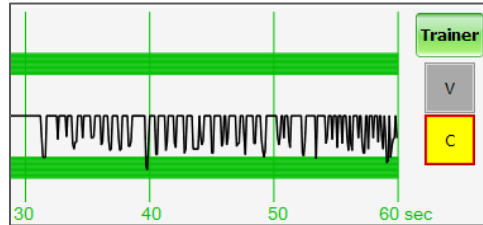
CPR OPTIONS

By default, the CPR trainer is configured to blink the reference borders at a 30:2 compression to ventilation ratio. To change the ratio, navigate to the menu bar and click the CPR dropdown and CPR Options.

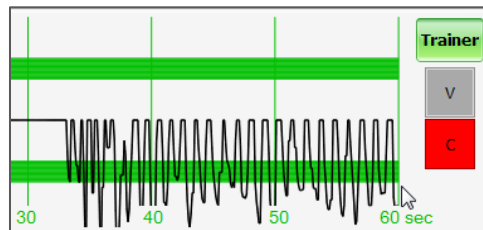


PERFORMANCE EXAMPLES

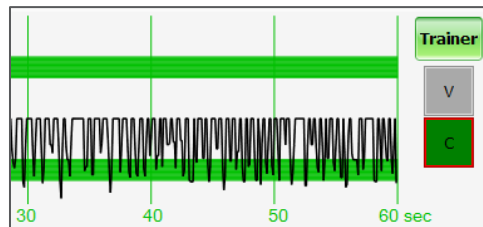
Compressions are too shallow. Waveforms mostly do not reach the green zone. Compression indicator is yellow.



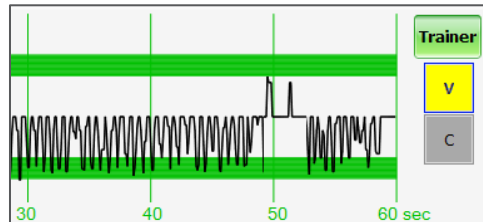
Compressions are too deep. Waveforms mostly exceed the green zone. Compression indicator is red.



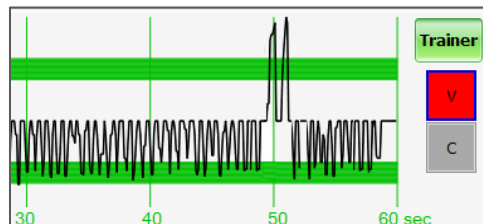
Compressions are performed correctly. Waveform peaks are mostly inside the green zone.



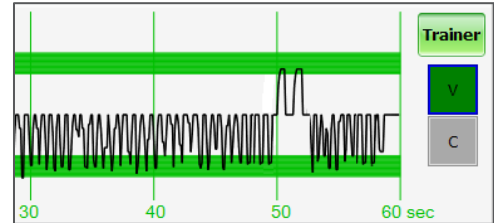
Ventilations are too shallow. Waveform peaks do not reach the green zone.



Ventilations are too strong. Waveform peaks exceed the green zone.

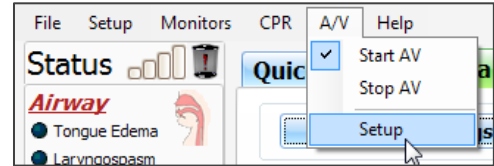


Ventilation was performed correctly. Waveform peak is inside the green zone.

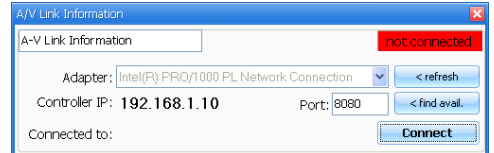


A/V

GaumardUI is capable of interfacing with a number of third-party A/V recording systems that enable the capture of Audio and Video interlaced with the events recorded in the software log. To enable the A/V menu, go Setup>Options>Other, and checkmark "Use A/V system."



Click Setup to open the configuration window. Configure the communication adapter and port number to send log information to a third party recording system. In order to set up the connection on the A/V System side, please consult your A/V System's documentation.



Help

On the menu bar, click the “Help” option to perform the following options.

GUI HELP

GUI Help option opens a digital copy of the simulator’s User Guide.

ABOUT GUI

Click “About GUI” for information on the GaumardUI software version and the simulator’s firmware revision.



CHECK FOR UPDATES

Redistributable GaumardUI installer files are available for download at <http://www.gaumard.com/software-updates/>. Follow the steps below to check for software updates using the built in update feature.

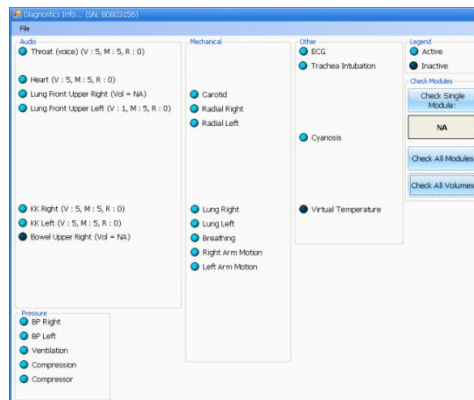
1. Connect an Ethernet cable to the laptop PC.
2. Go to the Help menu, and click on Check for Updates. The GaumardUI automatically starts searching for available updates.
3. Click “Install” to begin the update. The download progress bar begins to auto-fill as the setup file is downloaded.

Upon completion, the software automatically launches the setup wizard.

4. Click “Next”, and follow the wizard instructions to complete the software download.

DIAGNOSTICS

Use this feature as a troubleshooting tool to verify the status of the simulator’s features. For more information on using the diagnostics screen for troubleshooting, go to page 104.



Working with SUSIE

Disclaimer: The content of this table is subject to change without prior notice. Please contact Gaumard Scientific for the most current information.

Category	Feature
Airway	Nasal intubation
	Airway intubation
	Airway complications: Pharyngeal swelling, laryngospasm and tongue edema
	Intubation Sensor
	Airway sounds
Breathing	Respiratory patterns
	Lung sounds
	Bilateral chest rise
	Pulmonary ventilation: BVM, mechanical
Cardiac	Heart sounds
	Electrical Therapy
Circulation	Pulses – carotid, femoral and left radial
	Bilateral IV arms
	Blood pressure – Left arm
	Intramuscular injection placement sites
Systemic	Interchangeable breasts
	Gynecology package
	Urinary catheterization
	Dilated left eye
	Oxygen saturation monitor placement detection
	Bowel sounds
	Nasogastric feeding
	Colostomy and Ileostomy
	Ulcers
	Enema
Other	Streaming audio
	Virtual vital signs monitor
	MICRO+

Airway

NASAL AND ORAL INTUBATION

SUSIE's airway can be intubated through the left nasal opening and orally using LMA or endotracheal tubes.

Procedure	Recommended Device Size
Intubation (Blade size)	Miller 4 or MAC 3.5
LMA	Size 4
Nasal Intubation	8 mm outer diameter max
Oral Intubation	ETT 7 or 7.5

Warning:

Always lubricate the tubing, airway and nasal opening prior to performing any nasal or oral intubation.

Do not introduce liquids into the airway until reading the nasogastric feeding information on page 83.

AIRWAY COMPLICATION

Intubation is made more difficult by turning on laryngospasm and tongue edema.

INTUBATION SENSOR

Once intubated, the sensors detect the depth of the intubation tube. If the ET tube is inserted too deep, the left lung is automatically disabled, realistically demonstrating right mainstem intubation. Correcting the tube position re-enables the left lung.

AIRWAY SOUNDS

SUSIE has multiple upper airway sounds synchronized with her breathing: normal, stridor inspiratory, stridor expiratory, and stridor biphasic.

Breathing

BREATHING PATTERN

Users can easily control rate and depth of respiration; and choose independent left, right, upper and lower lung sounds, which are synchronized with selectable breathing patterns: Kussmaul's, Cheyne Stokes, Biot's, Apneustic, apnea, and normal.

LUNG SOUNDS

Multiple lung sounds are available: normal, wheezing, inspiratory squeaks, crackles, rales, asthma, bronchial, emphysema, muscle noise, pleural, rhonchi.

BILATERAL CHEST RISE

The right or left lung can be disabled individually.

PULMONARY VENTILATION

Ventilate SUSIE with a BVM or mechanical ventilator. Ventilations are measured and logged by the CPR trainer window. For information about working with the CPR trainer go to page 73.

Cardiac

HEART SOUNDS

SUSIE is equipped with several realistic heart sounds (normal, distant, systolic murmur, S3, S4, aortic regurgitation, aortic stenosis, mitral valve prolapse, mitral stenosis, mitral regurgitation, physiological S2 split) that are tied to a user-defined heart rate and selectable rhythms.

CHEST COMPRESSIONS

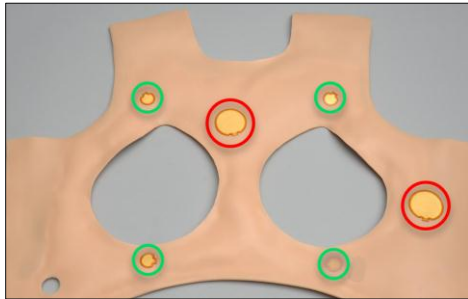
Set the heart rhythm to asystole and instruct the provider to perform chest compressions. Monitor the depth and frequency of chest compressions from the CPR trainer window. For more information on the CPR trainer, go to page 73.

ELECTRICAL THERAPY

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. Always treat the simulator as a real patient.

SUSIE is equipped with 4 ECG electrode sites marked **Green** that generate an ECG lead II waveform detectable on most of today's ECG monitors.

Defibrillate only on the large sternum and apex sites, circled **RED** below.



NEVER deliver a shock to ECG electrode targets on the shoulders or waist, marked **Green**. Doing so will not create a fire hazard, nor is there risk of shock to the provider, but internal damage to the simulator will result. This type of damage is considered improper use and it is NOT covered by the simulator's warranty. The system will require repair at our facility.

ECG AND ELECTRICAL THERAPY CHECKLIST AND 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, including removing any and all gel residue on the defibrillation patches from previous use(s). 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.
- Do not re-use the gel-adhesive pads. Do not leave them on for next day use.
- Use hard paddles or wet-gel pads preferably. 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.
- Real medical products, especially electrodes, sometimes use powerful adhesives that can be difficult to remove. A gentle, degreasing cleanser may be needed. Refer to Care and Cautions for more information.
- Electrode gel on the skin between any two electrode targets can become a pathway for electrical current, just as in real life. If this occurs, SUSIE's skin can be burned.
- Do not allow defibrillation pads to overlap ECG sites. Doing so will may damage the simulator and cause arcing.
- 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 SCRATCH** the conductive patches with abrasive objects; doing so will cause irreversible damage to the conductive sites and subsequently cause arcing.

Circulation

PULSES

SUSIE is equipped with right (carotid/ femoral) and left (carotid/ femoral/ radial) pulse sites dependent on blood pressure and synchronized with the ECG. Users can also disable distal left radial pulse to simulate severe hypotension.

PROGRAMMABLE BLOOD PRESSURE

Programmable blood pressure can be measured on the left arm using the modified sphygmomanometer included. Korotkoff sounds are heard between systolic and diastolic.

1. Put the cuff around the simulator's upper left arm with the cuff mark at the medial site of the bicep brachii, about an inch (two cm) above the anterior elbow. Placing the cuff any differently might give an incorrect reading.
2. Inflate the BP cuff, and auscultate Korotkoff sounds as you would a normal patient.

If the readings are not accurate to what is indicated on the GaumardUI status panel, go to page 65 for information on calibrating the BP cuff feature.

IV ARM

The simulator is equipped with bilateral IV training arms that can be used for bolus or intravenous infusions as well as for drawing fluids.

Warning:

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 provided simulated blood. Any other simulated blood brand containing sugar or any additive may cause blockage and/or interruption of the vasculature system.

Always flush the IV system with distilled water at the end of every simulation.

1. First, locate the fill syringe with tubing and the drain tube with pinch-clamp. Fill the syringe with the desired fluid -- water or simulated blood.



2. Connect the syringe with tubing to one port and the drain tube with clamp to the other port as shown.



3. Leave the drain tube clamp opened and depress the syringe until all air has been pushed from the IV system and fluid runs from the drain. Repeat the procedure for the other arm.



To simulate a patient with no accessible peripheral IV sites, connect only the syringe. Pull the plunger to create suction, which will collapse the veins. Disconnect the syringe tube from the arm port while maintaining suction. The port will seal, and the veins will remain collapsed.

Systemic

INTERCHANGEABLE BREAST EXAMINATION PACKAGE

The SUSIE includes proprietary silicone breast inserts developed to assist health professionals in teaching the processes and skills required to perform both breast self-examinations and clinical identification of pathologic conditions.

BREAST PATHOLOGY

The following is a detailed description of SUSIE's breast inserts:

- Right Breast: Normal
- Left Breast: Six discreet nodes on one side and a somewhat larger node on the other side of the breast. This breast represents (in a slightly exaggerated form) various stages of fibrocystic disease (chronic mastitis) which is due to an endocrine imbalance.

BREAST EXAMINATION INSERTS GUIDELINES, WARNINGS, AND MAINTENANCE

This breast examination inserts are made from material that approximates skin texture; therefore, use the same gentle techniques as you would when working with a real patient.

USER GUIDELINES

- Always handle the inserts with clean hands.
- Always palpate using the fatty pads of the middle three fingers.

Warning:

Do not palpate using fingernails

Do not clean with alcohol or aggressive solvents

Do not pack any sharp objects with the breast inserts

Do not press the breast against soiled surfaces, ink, or newsprint. The breast insert materia is absorbent.

MAINTENANCE

- Prevent items from resting or pressing against the breast as indentations will form on the pressure points. The breast inserts may return to the normal shape after the pressure is relieved.
- Clean the breast inserts using a mild solution of soap and water.
- Apply talcum powder to return the surface to a skin-like feel and appearance and to reduce tackiness. Re-apply talcum powder as needed.
- Remove the inserts when transporting SUSIE.
- Store the breast examination inserts facing down inside the protective case when not in use.

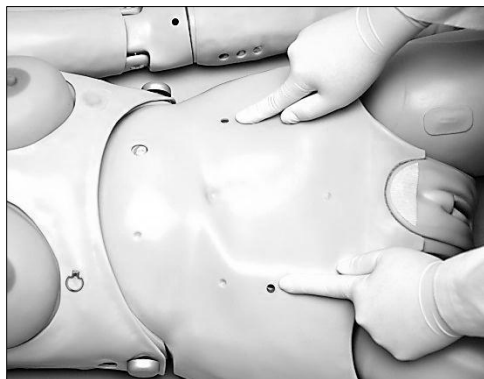
BOWEL SOUNDS

SUSIE produces audible bowel sounds. Sound types and volumes are controlled from the GaumardUI software.

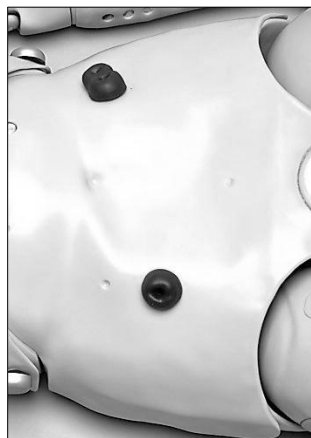


COLOSTOMY AND ILEOSTOMY

Perform colostomy and ileostomy exercises using the black ports on SUSIE's abdomen.



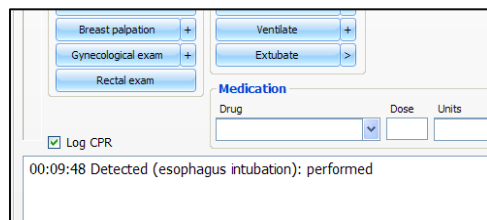
SUSIE includes replaceable stomas for care exercises. When removing the stomas, gently separate the stoma flange from the torso, and do not apply force directly to the stoma tissue itself. For care and caution information go to page 7.



NASOGASTRIC FEEDING

Before introducing fluids through an NG tube, please review the following requirements:

- Maintain the simulator with a 30° inclination angle or higher.
- Wait until the software logs the tube placement (shown in the picture below)



Warning:

Inserting fluids before the software logs the tube placement will void the warranty and can permanently damage the simulator.

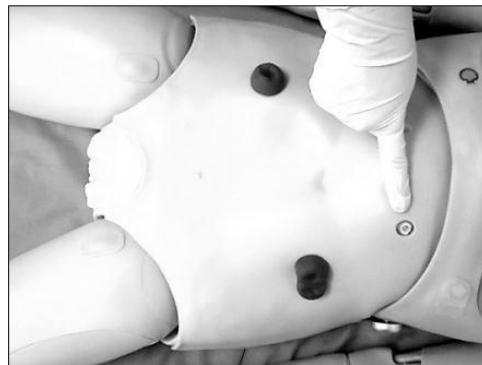
Feeding tube rate must not exceed 1 mL/second.

REMOVING GASTRIC FLUIDS

With the simulator ON, connect a modified syringe to the stomach/intestine fluid access port to remove fluids introduced by way of nasogastric feeding. Alternately, extract stomach/intestine fluids through the rectal opening.

Warning:

SUSIE must be powered on for fluids to be extracted through the stomach/intestine fluid access port. Failure to do so can permanently damage the system.



INTESTINAL ACCESS

SUSIE features a rectal opening with a reservoir for administering enemas and removing intestinal fluids introduced by way of nasogastric feeding.

GYNECOLOGY PACKAGE

SUSIE includes a gynecologic package that allows the practice the following gynecologic procedures:

- Vaginal douching
- Speculum insertion
- Pap smear
- Bi-manual pelvic examination
- Dilatation and curettage exercises
- Placement and removal of an intrauterine device (IUD)
- Palpation of normal and 20-week-pregnant uteri
- Inspection of normal and abnormal cervixes

The gynecology package includes the following items:



- 7-9 week pregnant uterus with Fallopian tubes. Quantity (1)
- 10-12-week pregnant uterus with Fallopian tubes. Quantity (1)
- 20-week pregnant uterus with Fallopian tubes. Quantity (1)
- Interchangeable normal patent cervixes. Quantity (4)

- Interchangeable abnormal cervixes. Quantity (4)
 - Parous normal cervix
 - Cervix with proliferation of columnar epithelium (ectropion)
 - Cervix with inclusion (Nabothian) cyst and endocervical polyp
 - Cervix with lesion (cancer)

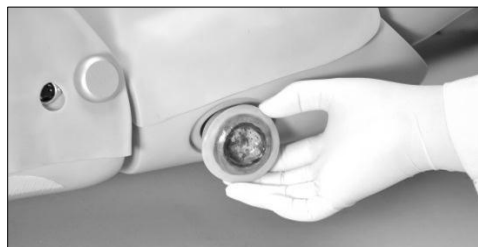
REPLACING THE UTERINE ASSEMBLY

The normal uterine assembly is pre-installed in the simulator. To replace the normal uterine assembly, unscrew the assembly and install any of the uterine assemblies included with the gynecology package.



DECUBITUS ULCERS

SUSIE has decubitus ulcers and ulcerated foot.



INTRAMUSCULAR INJECTION SITES

IM sites are located on both deltoids and quadriceps for placement and technique exercises.

Warning:

Do not inject fluids into the intramuscular sites.



URINARY CATHETERIZATION

Perform catheterization exercises on interchangeable male and female genitalia.

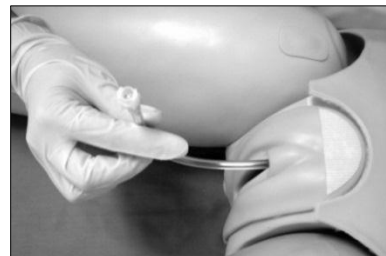
FILLING THE BLADDER

To fill the bladder with fluid for catheterization exercises, first locate the bladder fill kit included with the package. The filling kit includes (1) filling syringe and (1) filling adapter.

1. Install the female genitalia urethra adapter to prevent leaks.



2. Insert the bladder fill adapter into the urethra.



3. Connect the fill syringe to the fill adapter.



4. Fill the bladder with a maximum volume of 300 mL.
5. Remove the fill adapter.
6. Catheterize simulator using a lubricated 18 Fr catheter.

MALE GENITALIA CATHETERIZATION

Follow the steps below to install the male genitalia for catheterization exercises.

1. Remove the female urethra adapter.
2. Tightly secure the genitalia tubing into the urethra opening on the simulator to prevent leaks.
3. Catheterize simulator using a lubricated 18 Fr catheter.



Warning:

Remove all fluids after each use.

OXYGEN SATURATION MONITOR PLACEMENT DETECTION

The simulator detects the placement of an oximeter sensor on the left index finger. Once detected, the Gaumard Monitor software will display the oxygen saturation value programmed by facilitator on the GaumardUI software.

Please note that an oxygen saturation reading will not be available on the oximeter screen.

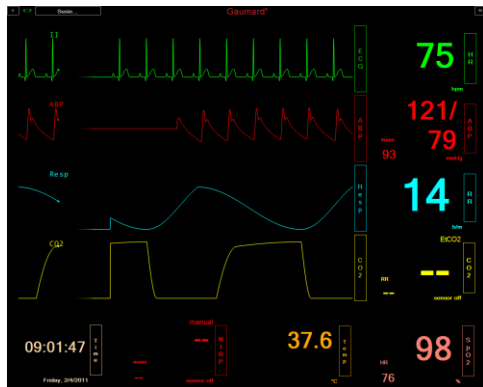
Other

STREAMING AUDIO

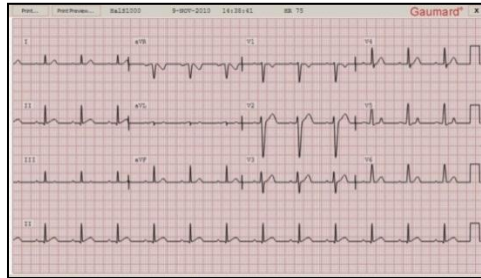
This feature allows the facilitator to speak as the voice of the simulator, listen to any discussions occurring near the simulator, and record custom phrases in any language. For information about working with the Streaming Voice option, go to page 49.

VIRTUAL VITAL SIGNS MONITOR

The Gaumard Vital Signs Monitor simulates a vital signs monitor attached to the simulated patient. Each trace can be customized independently of each other; users can set alarms, time scales, boundaries and grid options. In addition, it allows the facilitator to display lab reports, x-rays and other files on the Virtual Monitor screen for use by the provider.



To access the 12 lead ECG strip, navigate to the M menu located on the top right screen of the Virtual Monitor screen.



For information on how to setup Gaumard Monitors with GUI, go to page 16.

Upgrades

MICRO+

The Micro+ system is an all-in-one debriefing and simulator control solution for facilitators working in a lab or mobile environment. The system combines GaumardUI and powerful audio/video recording software in one control laptop.



Appendix

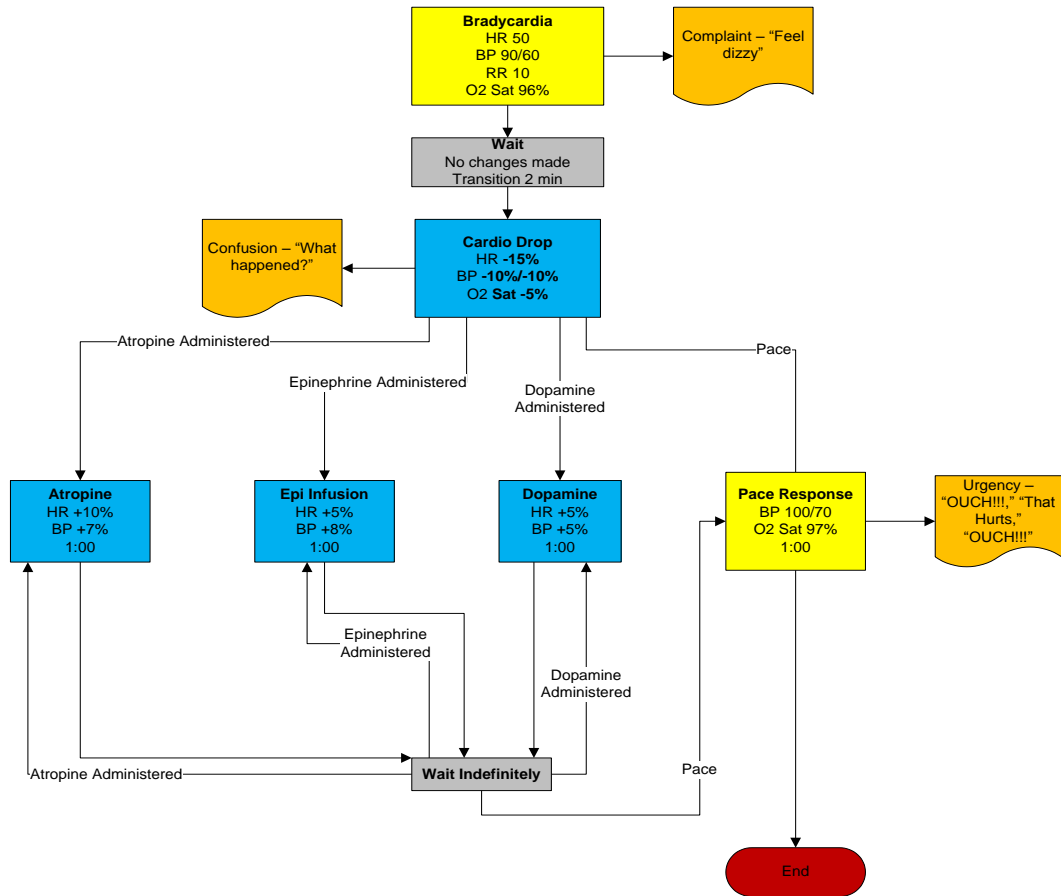
More about Scenarios

Factory Preset Scenarios Flowcharts

	Scenario Name	Type	Linear or Branching
1.	Bradycardia	Adult ALS	Branching
2.	Chronic Liver Failure	Systemic	Linear
3.	Chronic Obstructive Pulmonary Disease (COPD)	Respiratory	Branching
4.	Closed Head Injury	Neural	Branching
5.	Congestive Heart Failure (CHF)	Cardiac	Branching
6.	Ischemic Stroke	Cardiac	Linear
7.	Pancreatitis	Systemic	Branching
8.	Pulseless Arrest	Adult ALS	Branching
9.	Spinal Cord Injury (SCI) with paralysis	Neural	Branching
10.	Acute Coronary Syndrome STEMI	Cardiac	Branching
11.	Tachycardia – pulse	Adult ALS	Branching



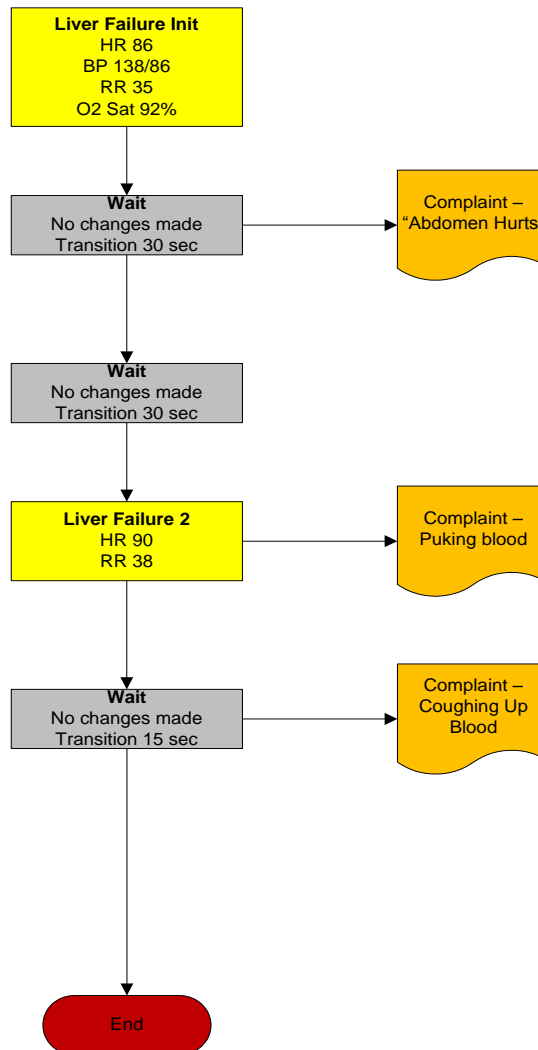
An in-hospital patient is diagnosed with Bradycardia and requires immediate attention . Note: for this scenario to function as intended the instructor should enable automatic pacing capture in the 'Setup - > Auto-Responses' menu.





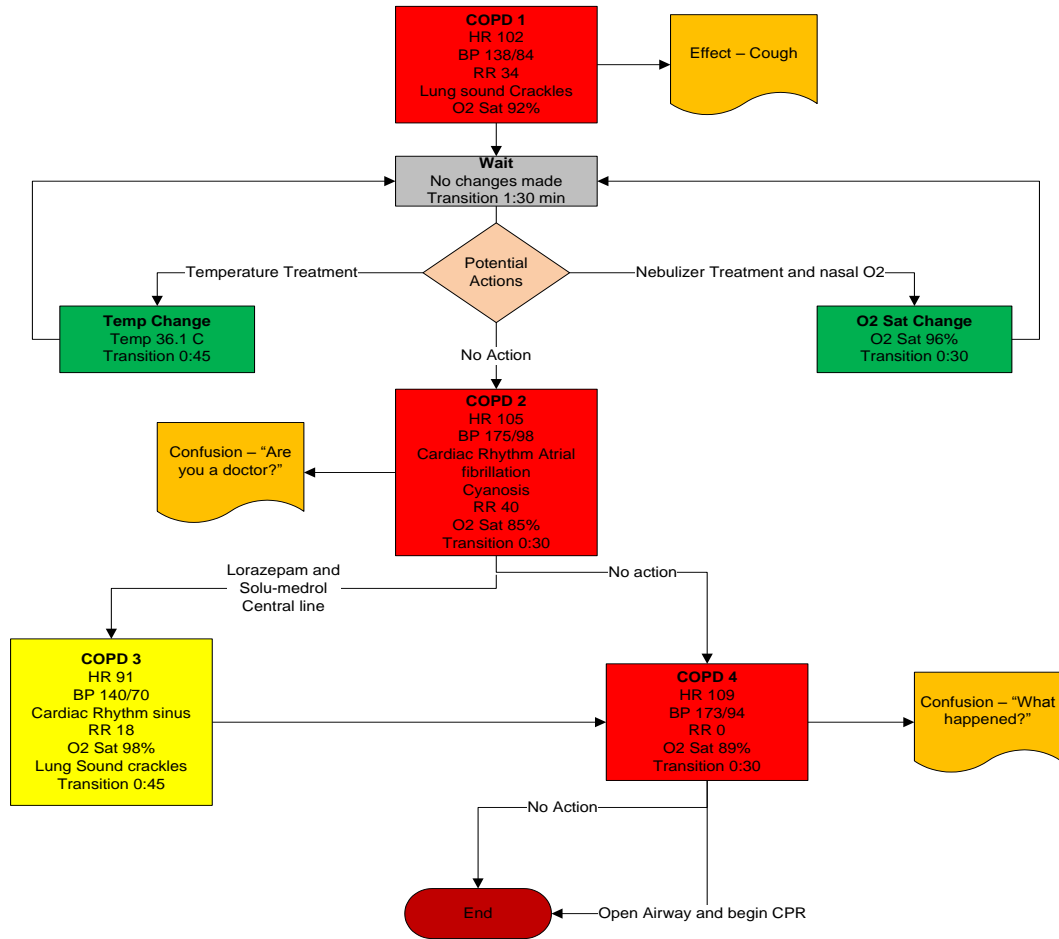
Susie® S2000
Chronic Liver Failure
Systemic

Patient reports to doctor complaints of increasing weakness, poor appetite, and increasing abdominal distention that is making it harder to breathe. She has been producing dark-colored urine and notices a yellow discoloration of her eyes. Mrs. Gonzalez is a known alcoholic who has been hospitalized twice in the past few months for vomiting blood. She says that she has been unable to cut down on her drinking. She has a PMH of alcoholism for the past 20 years and associated complications including gastritis, alcoholic hepatitis, and aspiration pneumonia. Mrs. Gonzalez takes no medications and has no known allergies.





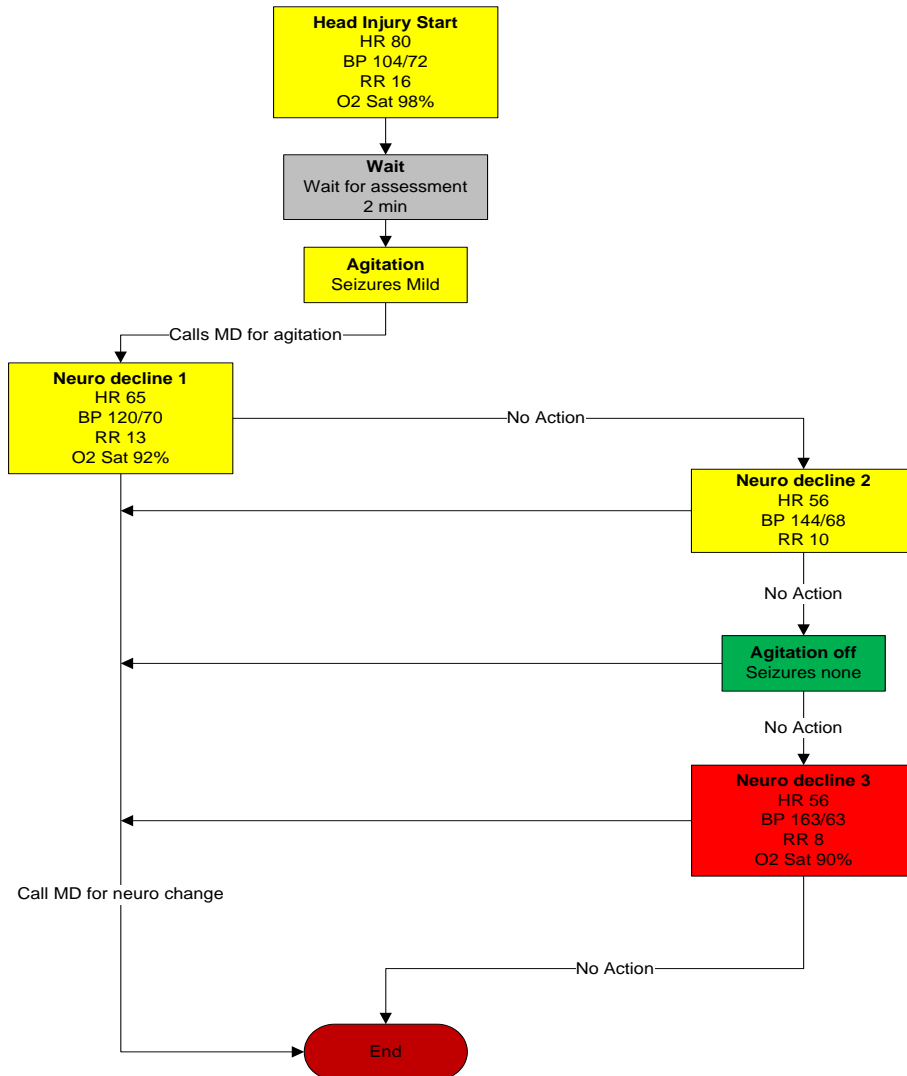
(Chronic Obstructive Pulmonary Disease). A 74 year old female patient was admitted to the hospital yesterday for increased dyspnea and elevated mucus production. She looks thin and poorly nourished.




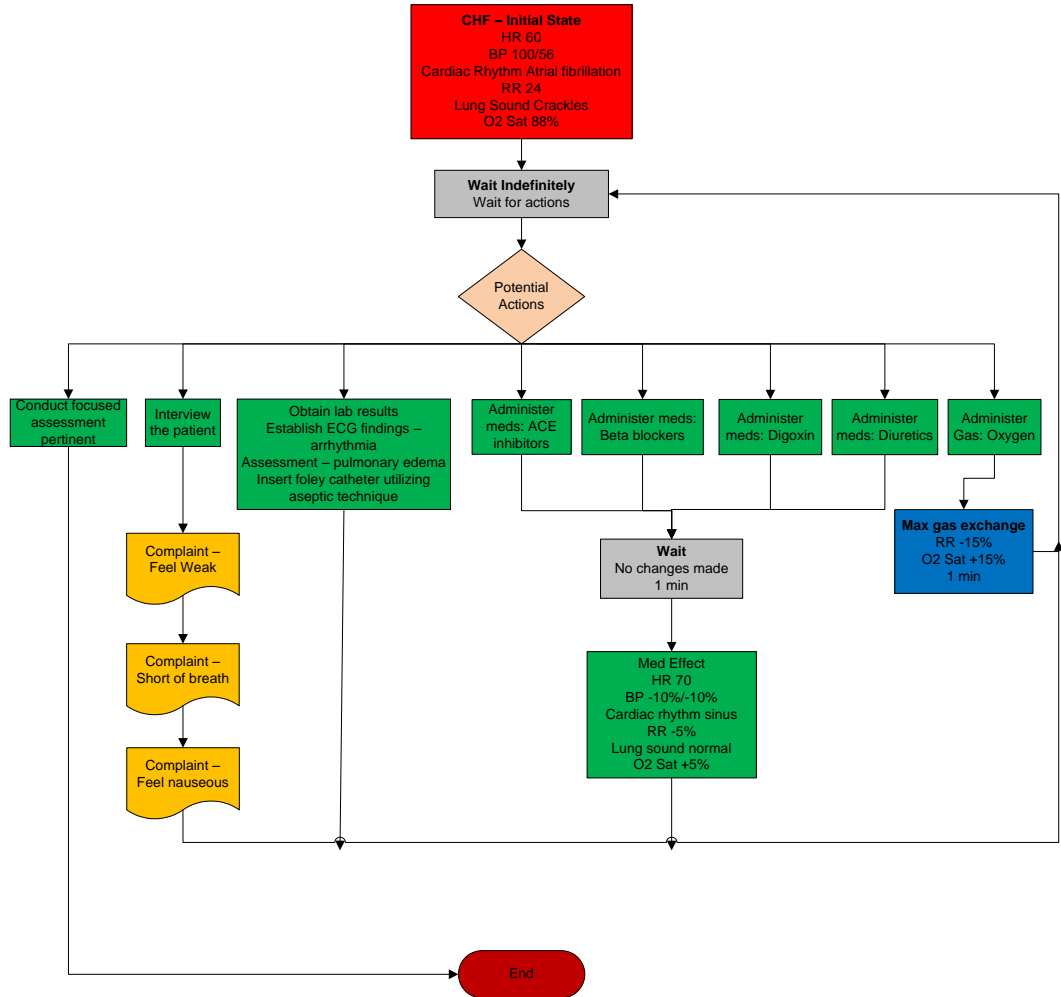


Susie® 2000
Closed Head Injury
Neural

- Perform a focused neurological assessment of a patient with closed head injury.
- Perform serial neurological checks as ordered and record on the appropriate form.
- Perform a complete pain assessment and reassessment.
- Recognize agitation in a closed head injured patient and provide appropriate relief.
- Report abnormal neurological findings to the physician.
- Take verbal physician's orders and provide appropriate read-back of the orders.

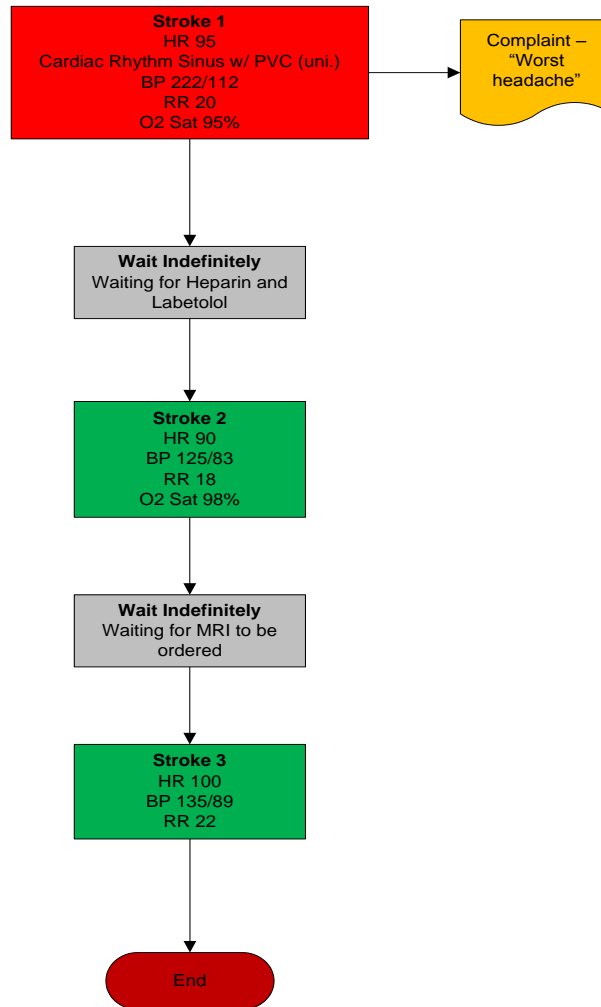


 <p>Gaumard® Simulators for Health Care Education</p>	<p>Susie® S2000 CHF Cardiac</p>
<p>(Congestive Heart Failure). Wendy Morgan, 58 years old.</p>	



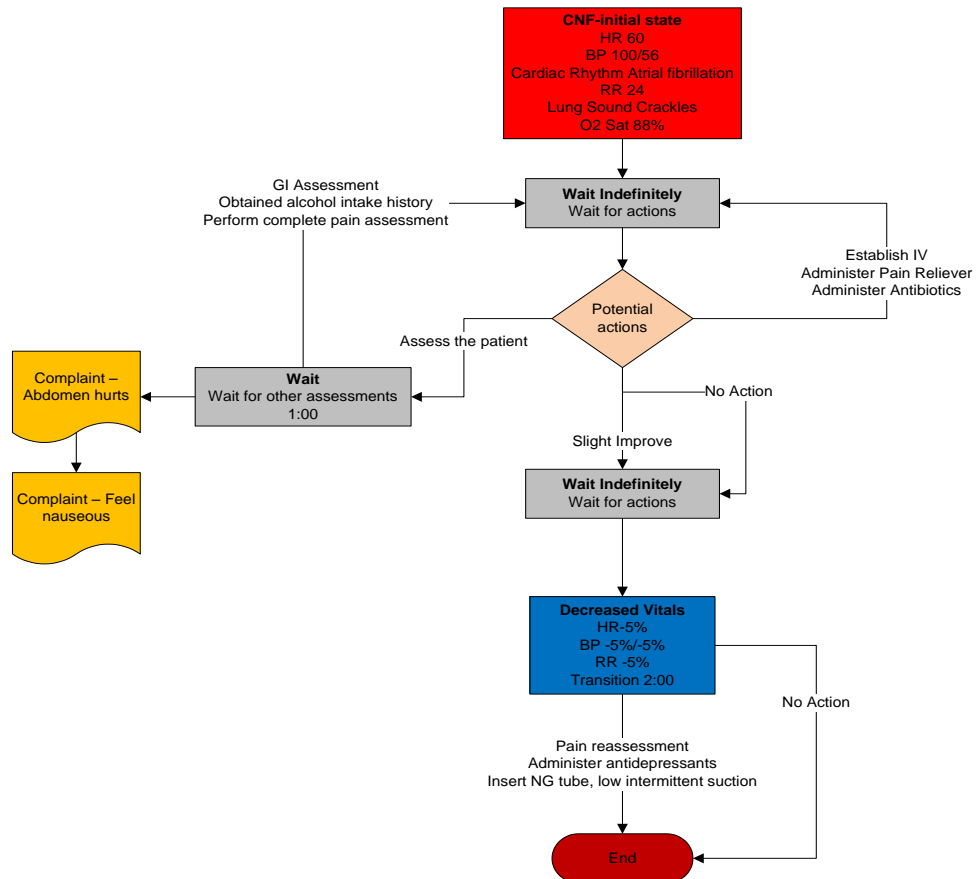


This 66 year old female was at home watching TV when she developed an onset of slurred speech. She was transported to the Emergency Department by EMS. A head CT scan confirmed she was suffering an acute ischemic stroke.





Jane Ellen, 45yo.

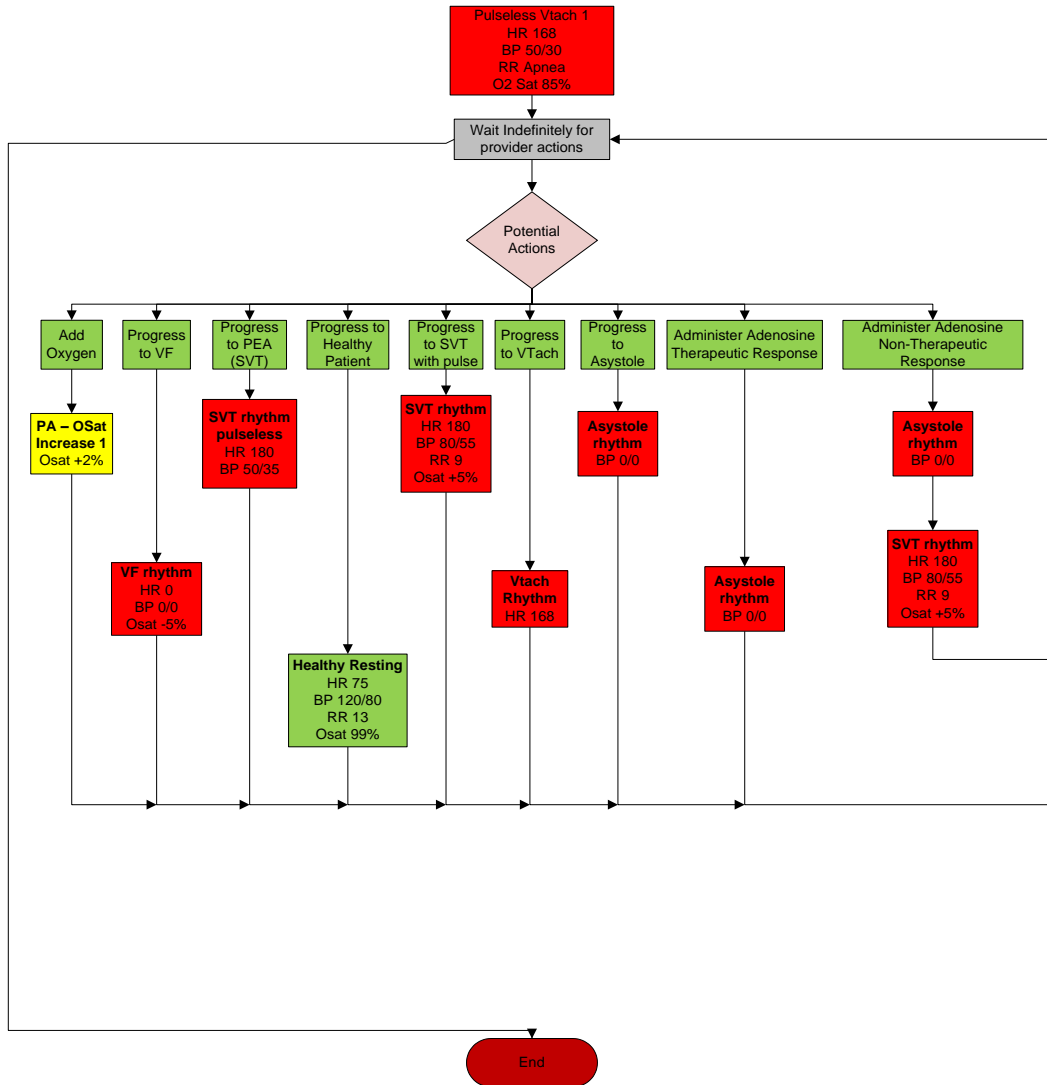




Gaumard®
Simulators for Health Care Education

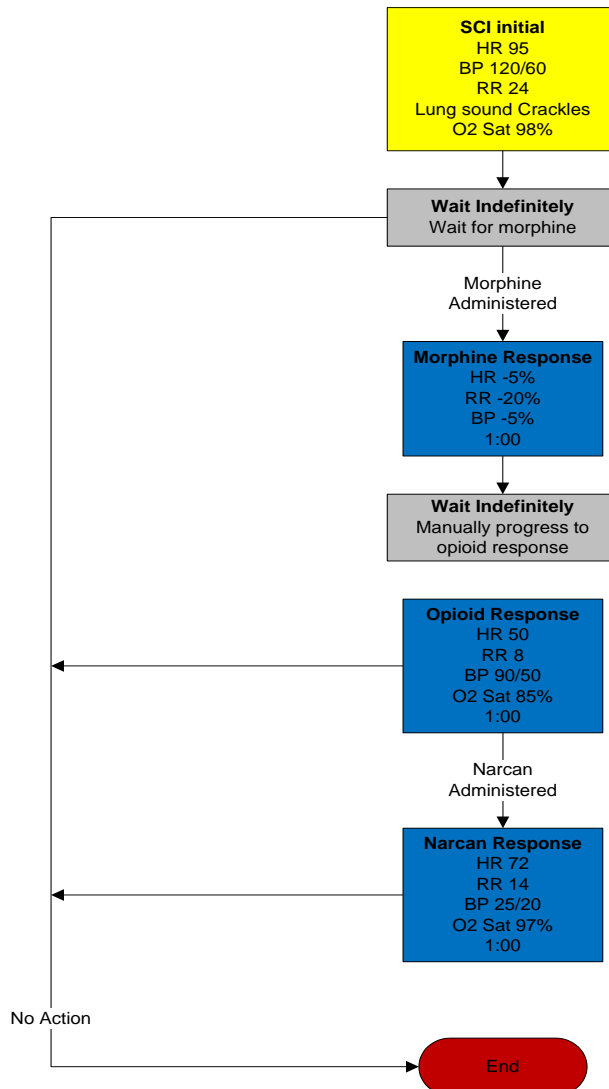
Susie® S2000
Pulseless Arrest
Adult ALS

A young female was found unconscious.



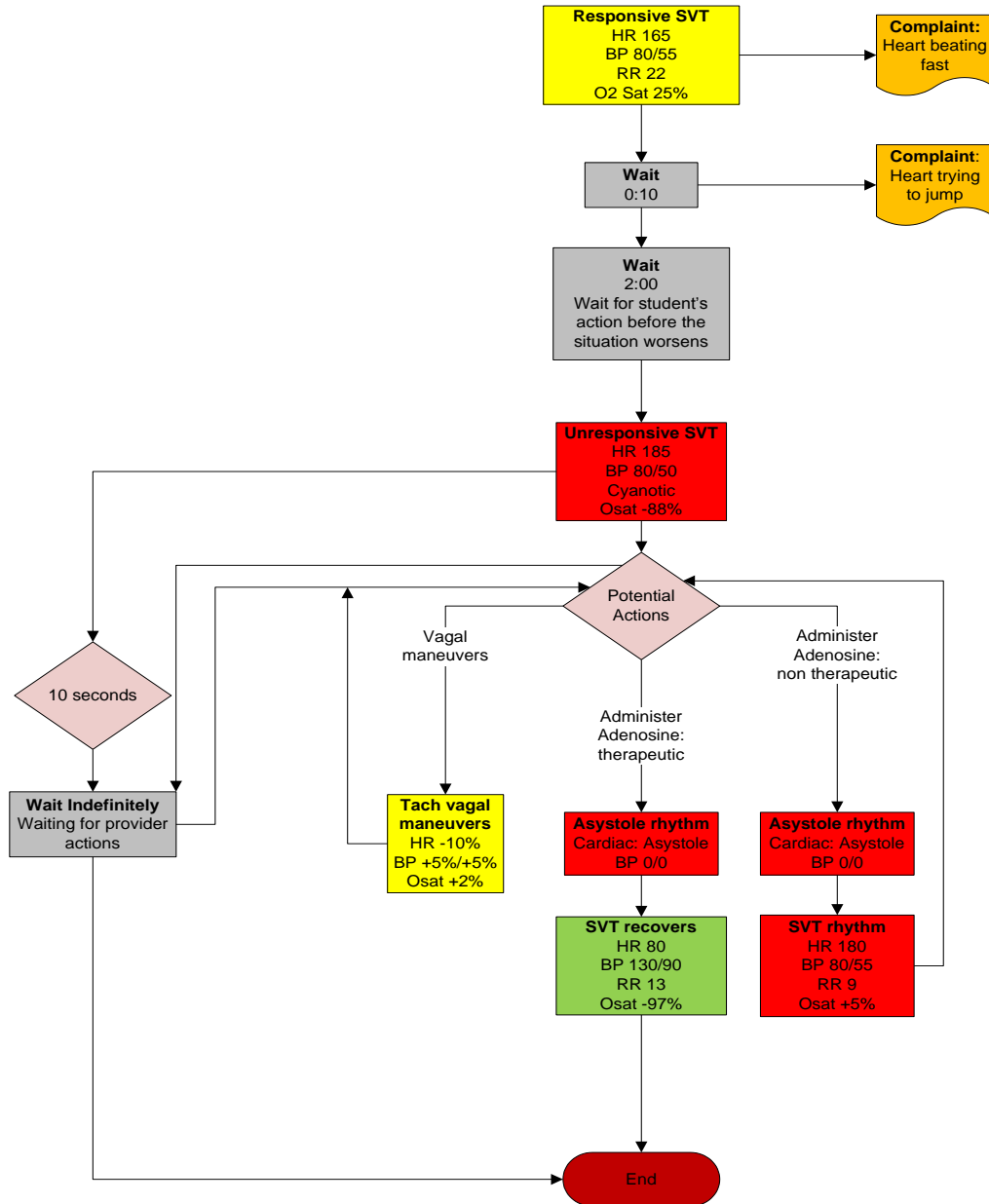


- (Spinal Cord Injury). With this scenario, care provider may:
- Perform post-operative assessment of a client with spinal stabilization.
 - Perform neurological assessment of a client with spinal cord injury resulting in paralysis.
 - Perform complete pain assessment and reassessment.
 - Administer medication according to physician orders via multi-med line.
 - Evaluate responses to opioid reaction after administering medication as ordered.
 - Perform administration of narcotics via a PCA pump.





SVT with pulses. Note: this scenario can progress directly to the Pulseless Arrest scenario. To do so, load "Pulseless Arrest" after stopping this scenario while on Node 2.



Tips on Creating Scenarios

THINKING IN TERMS OF PALETTE ITEMS

As described previously, palette items represent complete or partial groups of settings that have been stored as a single item. Applying partial states will hold constant all settings that are left unspecified.

Not only does it take time to customize the palette, but a very large palette becomes difficult to navigate. So, it is desirable to minimize the number of Palette Items in each Profile. To accomplish this, an experienced facilitator tries to create items that are as generally applicable as possible and can therefore be applied to a wide range of scenarios. The key is to only include in your palette items the settings that are directly related to the physiological event represented by that palette item.

SMART SCENARIOS

After reading the Details, Palette, and Scenarios sections of this guide, it should be clear how to build a scenario. You may have already tried building your own or modifying some of the factory presets. The following four guidelines will refine your ability to build the best possible scenarios.

1. How will the scenario begin?

The first thing to consider is the initial condition of the patient. Create a Palette Item to describe this condition. Make sure that this first step in the scenario is a complete state. That is, indicate some selection for each and every available setting on the Details page. Remember that only the settings you specify will cause a change in SUSIE, and all other settings will remain constant. Therefore, by starting with a complete state, SUSIE's condition will always be the same when the scenario starts, regardless of what she was doing previously.

Likewise, the "transition duration" of the first step in the scenario should be zero, indicating that changes are applied immediately.

There is one point that can cause confusion and warrants further explanation. It is an extension of the above discussion of partial states. The issue is best illustrated through the following example:

Suppose that you are creating a Palette Item to start your scenario. In this case, you have decided that the patient will be apneic. The question is, "How should the lung sounds be set?"

Most people's first inclination is to set the lung sounds to "none." This is incorrect, despite apnea. Obviously, no lung sounds should be heard during apnea, but since you have already set respiratory rate to zero, none will be. (Sounds are synchronized to the breathing cycle.)

What you are really setting here when you choose a lung sound is the condition of the lungs, given respiratory drive. That is, if the patient's respiratory rate were changed from zero, what sound would be heard? Assuming that the lungs themselves are normal in this scenario, you would choose "normal" for the lung sound setting.

Then, as the scenario progresses, if the patient starts breathing, there will be no need to set the lung sound again. It will already be set. The same principle applies to the heart sound and other settings.

2. Include notes to guide the facilitator during the simulation.

It is common for scenario designers, especially those who act as facilitators, to neglect the importance of notes in the scenario. They think that they will remember the learning objectives, patient history, and other details at the time they are ready to conduct the simulation. They usually don't, especially when revisiting a scenario months after creating it.

When you add "Wait" and "Wait Indefinitely" steps to a scenario, you have an opportunity to edit the item description. Use this description field to hold notes to the facilitator. Typically, scenario designers write notes in that space to indicate what the provider(s) or facilitator should be doing at that point.

Further, when saving the scenario, you may edit the scenario description. This is the best place to put patient history and any other longer notes and instructions.

3. Assume that providers will do the right thing.

Usually a scenario should be created with the assumption that the providers will perform correctly. As long as they do, the scenario can be allowed to continue.

Naturally, preparation must be made for what might happen to SUSIE when providers deviate from expectations. The consequences of such deviations can sometimes be included in the scenario, punctuated by "Wait Indefinitely" items. In other cases, the simulation will require more direct control by the facilitator via either the Palette or Details page.

4. Choose auto-response settings based on the scenario content and the objectives.

As seen, auto-responses can be used to free the facilitators' attention. They also enhance realism by presenting instant reactions to the care providers. On the other hand, sometimes it is not possible or desirable to determine the responses before the simulation begins. Different environments and applications call for different settings.

Some teaching practices are best done with the auto-response settings in Prompt mode. Responses must be triggered by a vigilant facilitator. Though it is slower and requires more attention, the benefit of Prompt over other modes is that the simulation can be allowed to go in any direction, and it will be possible to choose the response on a case-by-case basis.

Other learning exercises require a higher degree of automation. For such applications, most facilitators choose Auto mode for the auto-response settings. The key issue is standardized timing of symptom presentation. A consistent, repeatable simulation is essential for fair assessment of that care provider in relation to others and for the broader interpretation of results in the context of training validation studies.

When in doubt, it is best to choose *Prompt* mode, in which the facilitator will be given direct control of the responses as events are detected.

FILE STRUCTURE

Advanced users may find it helpful to understand the GaumardUI directory structure. With direct file manipulation, one can easily move palette items and scenarios between profiles, as well as move entire profiles from one computer to another.

(C:\Program Files (x86)\Gaumard Scientific\Gaumard User Interface\profiles)

PROFILES

In the GUI program folder is the "profiles" sub-folder (e.g. "C:\Program Files\Gaumard Scientific\Gaumard User Interface\profiles"). All user information is saved there, and it is the only folder that should be modified manually. In the example shown, notice that there are two profiles in this installation, "Default Profile," and "Quick Start Scenarios."

PALETTE ITEMS

Saved as "*.plt" files, palette items in each profile are located at the top-level of each profile folder. To copy palette items from one profile to another, copy the .plt file found in the source profile folder.

Scenarios

Scenarios are stored as sub-folders within profile directories. Scenarios can also be transferred between profiles by copying the scenario folder and its contents.

Warning:

Never modify files in the "resources" directory or those at the top-level of the "Gaumard User Interface" directory.

Never manipulate files or folders while the GaumardUI software is running.

Never modify or delete "*.dll," "*.scn," or "*.sys" files.

Troubleshooting

General Troubleshooting Guide

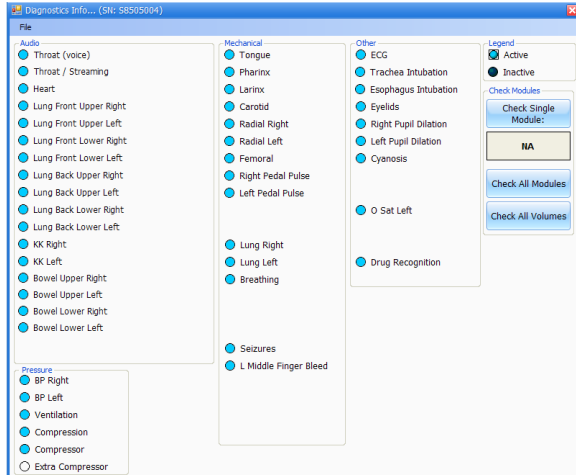
Use the following table to find causes and solutions to a number of possible problems.

Symptom	Possible Cause	Solution
Communication never gets established or is lost (blinking communication indicator is consistently red)	Data cable is not connected.	Verify connection of the Ethernet cable and USB module to the computer's USB port.
	USB Module is not connected.	
Chest compressions are not properly detected or not detected at all	Is the communication indicator panel consistently yellow?	See solution above in section making reference to "blinking communication indicator is consistently yellow"
	Is the respiratory rate set to "0 / min"? Chest compressions are only detected when the respiratory rate is set to 0 per minute (0 / min). Otherwise they are ignored	Set respiration rate to zero
	All others	See "Calibration Wizard" section inside User's Manual
Artificial ventilations are not properly detected or not detected at all	Is the communication indicator panel consistently yellow?	See solution above in section making reference to "blinking communication indicator is consistently yellow"
	All others	See "Calibration Wizard" section page 64.
Simulator's chest does not rise with artificial ventilation (e.g. BVM)	Simulator not running	In some simulators, the trachea is disconnected from the lungs when they are not on.
	Lung/s are disabled	Enable the lungs from "Detail" page on the GaumardUI software
Low chest rise (or no chest rise at all) while breathing	Wrong settings or disabled lungs	Make sure lungs are enabled and both respiration rate and inspiration percent are different from "0". Restart the simulator.
	Low air volume	Set Respiration Rate to 13, and Inspiratory Time to 33%.
Loss left radial pulse	Radial pulses disabled	Make sure to enable brachial pulse on "Details" tab page
Pre-built scenarios don't show up		Select "Quick Start Scenarios" when starting the software. To switch between profiles without exiting the software, Click File>Profile on the menu bar.

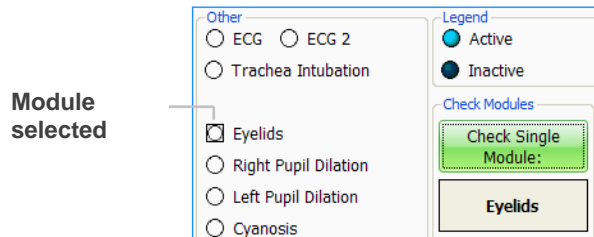
Symptom	Possible Cause	Solution
A sound is absent or is not heard at desired volume level	Volume not set to user's criterion.	Every sound has a volume control. Play with the volume control to get it to the desired level.
Fluid leaks around the catheter during catheterization exercise	Female urethra adapter is not installed	Install the female urethra adapter for a better seal during catheterization of the female genitalia.
	Male genitalia urethra is not secured into the simulator's urethra opening.	Tightly secure the tubing into the simulator's urethra opening.
No image on the extended monitor screen	Monitor is off, video cable is not connected	Connect the monitor's video cable to the laptop computer. Turn on the monitor.
	Video configuration is not set to extended display.	Enable the extended desktop configuration from the display properties. Go to page 107 for more information.
	Virtual monitor option is not activated	On the menu bar, click Setup>Options>Environment tab and set the connection mode to FIXED, then enter the simulator's serial number. After the serial number is entered, return to the Options menu and select the "Add-ons" tab. Checkmark "Use virtual monitors" and enter the activation code. Finally, restart the software.
Patient vital signs are not updating	Adapter is not set to "loopback" Port numbers do not match on the communication setup window.	On the GaumardUI menu bar, Click Monitor>Configuration. Set the adapter to "Loopback" and the port number to "8001", then click connect. On the Gaumard Monitors software, click the V menu on the top left select "COMM Setup". Enter the following information: Controller IP 127.0.0.1 Port: 8001. Finally click "Connect".
	Communication Module is not connected	Connect the Communication module to the control computer and restart the software.
Streaming has poor quality or echo	Headset is not connected to the computer. Headset is not recognized by GaumardUI	Close the software and connect the MIC and Headphone jacks into the designated ports on the laptop.
	Headset is not set as default input device.	Close the software and connect the MIC and Headphone jacks into the designated ports on the laptop. Then, set the headset as the default device on the laptop's audio manager software.

Diagnostics

The diagnostics tool is used to test the status of the modules that control the simulator's features and functions as part of the troubleshooting process. On the menu bar, click Help>Diagnostics to open the Diagnostics window.

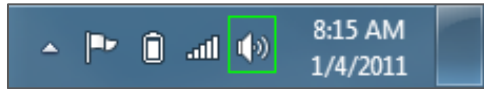


To run a complete module test, click "Check All Modules". Active modules report light blue and inactive modules or modules not installed report black. To test the status of a module individually, click the module entry from the menu and then click "Check Single Module". If a module for an installed feature is inactive, please contact technical support for advanced troubleshooting steps.

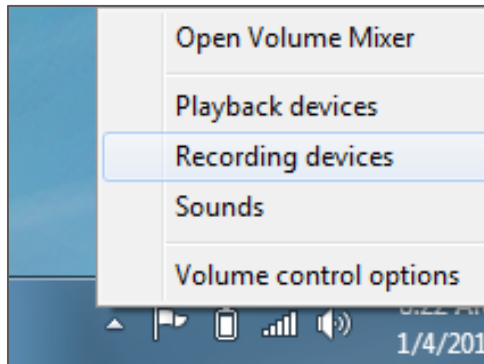


Microphone Boost (Windows® 7)

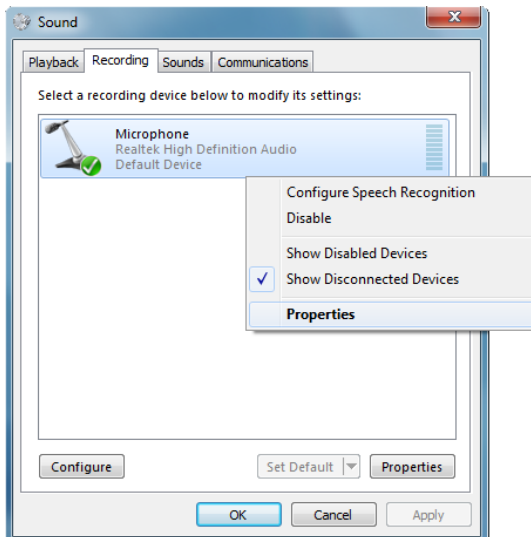
1. Use the instructions below to increase the streaming audio volume. The Headset must be connected to the laptop in order to adjust the microphone volume properties. In addition, adjust the recording control on the headset's physical control to high.
2. Right click on the speaker icon located on the bottom right corner of the laptop's taskbar.



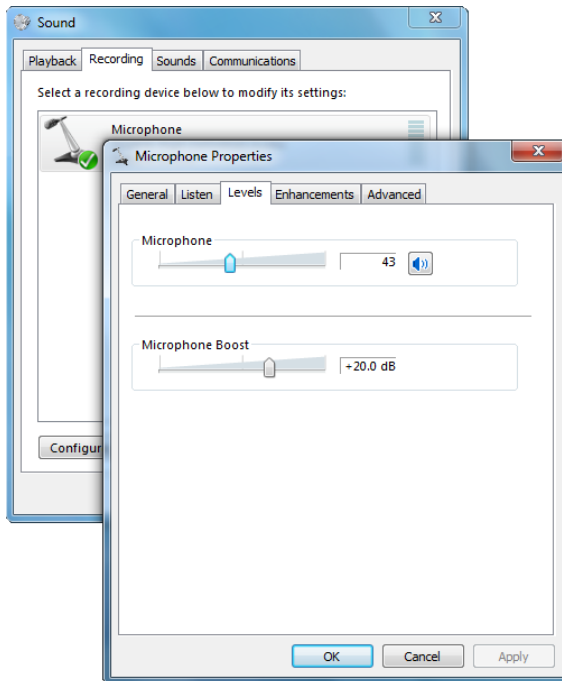
3. The speaker menu is displayed. Click on the recording devices option.



4. The sound properties window and recording tab are displayed. Right-click the microphone option and select properties.

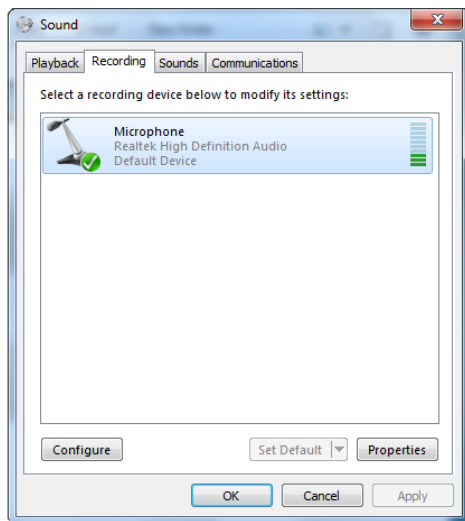


- From the microphone properties sub menu, select the Levels tab. Use the microphone control to decrease and increase the recording volume. For an additional increase in recording volume, use the microphone boost control.



Microphone boost increases volume and saturation, which can decrease overall clarity. For optimal clarity, adjust the microphone volume to 100 and the microphone boost to +10.

- Click OK to save the changes to the volumes on the microphone properties menu.
- Click OK to close the Sound properties window.

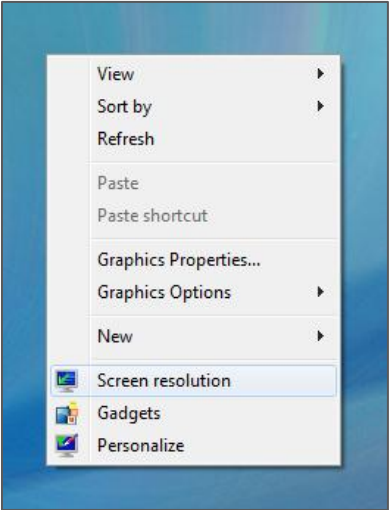


- It might be necessary to re-adjust the microphone settings to accommodate environment noise.

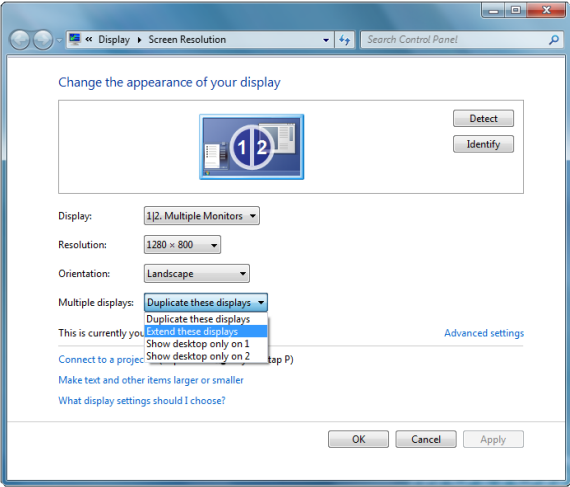
Enabling the extended screen

This simulator system uses an extended screen to display the vital signs information. Enable the extended displays using the instructions below. Prior to configuring the extended displays, the monitor must be connected and powered on. For information about connecting the extended screen to the laptop computer, go to page 16.

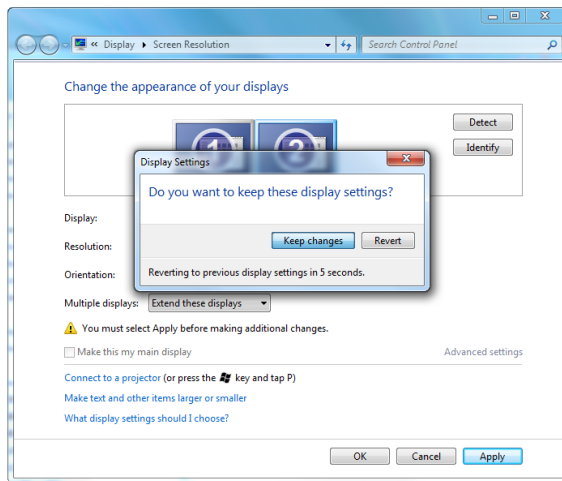
- 1. Right-click the desktop, then click "Screen resolution".



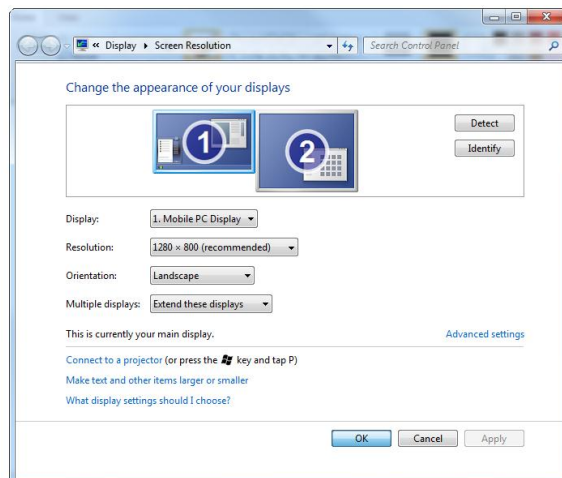
- 2. From the "Display Properties" window, navigate to the "Multiple displays" drop-down menu.
- 3. Select "Extend these displays" from the list and click "OK".



- The Display Settings window prompts to accept the changes. Click “Keep changes” to continue.



The screens diagram will show that both screens are enabled.



- Click OK to save changes.

Consumables and Replacements

Selected Parts List

Contact Gaumard Scientific for a **complete list** of consumables and replacement parts and their prices. C=Consumables; R=Replacements; A=Accessories; U=Upgrades; M=Replace in Miami Factory ONLY

Item ID	Name	Type	Description
S1001.009	Power Package	R	100-240 V AC battery charger with rechargeable backup battery
S1001.010	Backup Battery	C	Rechargeable battery
S1001.011	Power Supply	R	100-240 V AC battery charger with label
S1001.023R.L	Lower Right Arm	C	Lower right IV arm
S1001.024L.L	Lower Left Arm	C	
S1001.027L.L	Lower Left Leg	R	Lower leg assembly
S1001.027R.L	Lower Right Leg	R	Lower right leg assembly
S1001.048	Adult IV Filling Kit	R	Fluid dispensing syringe with filling tube
S1001.053L.L	Upper Left Arm	M	Light color upper left arm assembly with modified blood pressure
S1001.055	Decubitus Ulcers	R	
S1001.056	GYN Package	R	3 normal patent cervices, 4 abnormal cervices, 1 uterine assembly with shortened round ligaments and Fallopian tubes, 7-9-week pregnant uterus with Fallopian tubes, 10-12-week pregnant uterus with Fallopian tubes, 20-week pregnant uterus, 1 talcum powder, 1 small flashlight
S1001.057	Breast Palpation Kit	R	Set of 2 breast
S1001.060	Simulator Transport Case	A	Soft storage and transport case with wheels
S1001.210	MICRO+	U	
S1001.021.L	Male genitalia	R	
	Stoma set 2	R	
S1001.087	Streaming voice headset	R	
S1001.046	Bladder Filling Kit	R	
S1001.204	Control Laptop	R	
	Computer Carrying bag	R	
S1001.206	Wired RF Module	R	RJ45 Communications Module
S1001.224L.L	Lower Left Arm Reveining	M	Arm with Osat detection

S1001.224R.L	Lower Right Arm Reveining	M	Lower right IV
S1001.EXW	Two Year Extended Warranty	A	Extended warranty for Years Two AND Three
S1001.INST	In-Service Training	A	Day of in-service training and installation

Warranty

EXCLUSIVE ONE-YEAR LIMITED WARRANTY

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:

1. Damage resulting from accident, misuse, abuse, neglect, or unintended use of the Gaumard product;
2. 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
3. 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. Gaumard does not provide any warranty, express or implied, with respect to any third-party products. Defects in third-party products are covered exclusively by the warranty, if any, provided by the third-party.

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:

1. Contact Gaumard and request authorization to return the Gaumard product. Do **NOT** return the Gaumard product to Gaumard without prior authorization.
2. 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.
3. 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.

Extended Warranty

In addition to the standard one year of coverage, the following support plans are available:

- Two-Year Extension (covers second and third years)
- Call for pricing (USA only)



Contact Us

E-mail Technical Support: support@gaumard.com

E-mail Sales and Customer Service: sales@gaumard.com

Phone:

Toll-free in the USA: (800) 882-6655

Worldwide: 01 (305) 971-3790

Fax: (305) 667-6085

Before contacting Tech Support **you must:**

1. Have the simulator's Serial Number (located in the left leg under the IM site)
2. Access to the simulator and the control computer if troubleshooting is needed.

Post: Gaumard Scientific

14700 SW 136 Street

Miami, FL 33196-5691

USA

Office hours: Monday-Friday, 8:30am - 4:30pm EST (GMT -4 Summer Time)

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

