

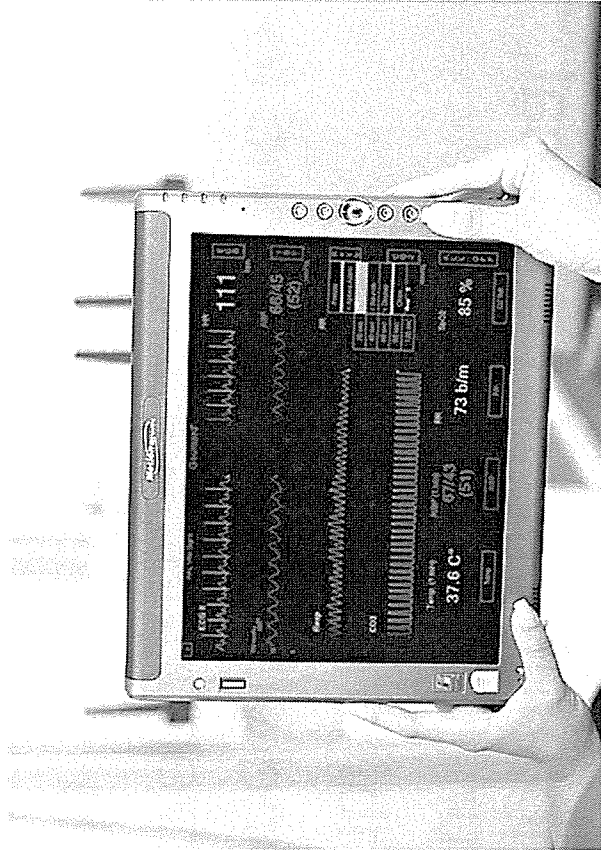
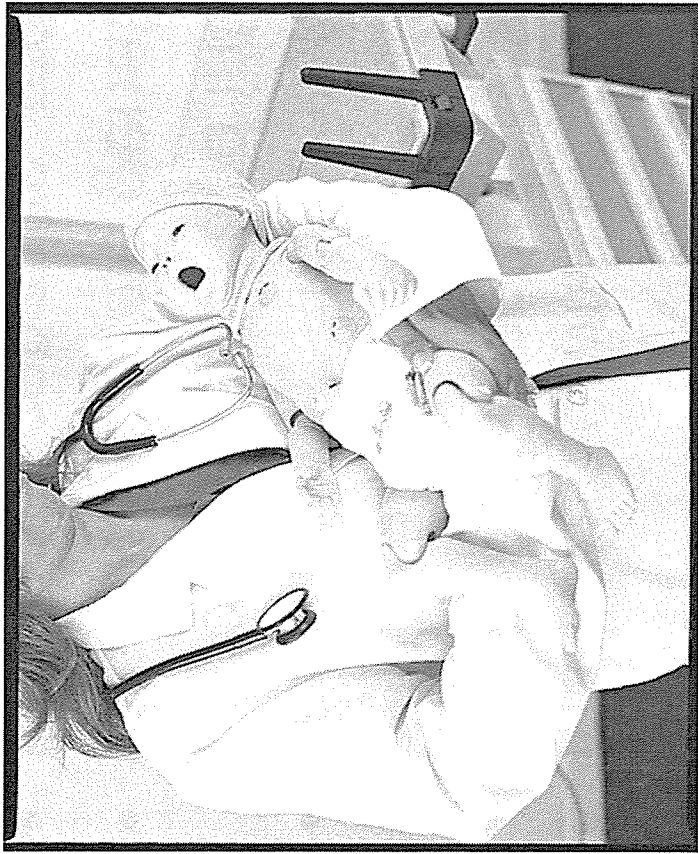
# Gaumard Scientific

- Develops and markets simulators worldwide since 1946
- Introduced HAL the first mobile and tetherless simulator for both pre-hospital and in-hospital care in 2004
- This proven technology used to create Newborn HAL the first mobile and tetherless newborn June 2006

# Newborn HAL...a neonate at 40 weeks gestational age

- Untethered with wireless communication
- Fully responsive even while carried
- Physiologic modeling and trending
- Built in compressor and rechargeable power supplies so there are no tubes or wires to disconnect
- Wireless control and documentation
- Comprehensive performance feedback

NOELLE's neonate is wireless, tetherless, and fully responsive even while carried



# Newborn HAL features

- Intubatable with breathing, pulses, ECGs, vocal, heart and respiratory sounds, and more
- Bilateral IV and BP + umbi and tibia
- Arm motion, skin color and vital signs respond to hypoxic events and interventions
- Interchangeable genitalia
- Use our scenarios, modify them or quickly create your own using our powerful yet intuitive software
- Includes a wireless tablet PC

# Intuitive software controls Newborn HAL as well as the neonatal monitor

Newborn HAL User Interface - Default Profile

File Setup Monitor Help

**Status** **Appearance** **Airway** **Breathing** **Circulation** **Sinus**

Skin Color:  Crying

Throat Sound: **grunting**

**Breathing**  
 Resp. Pattern: **normal**  
 Resp. Rate: **40** /min  
 % Inspiration: **40**  
 Chest Rise: R  L   
 Lung Sounds:  
 Right **insp. stridor**  
 Left **normal**  
 (O<sub>2</sub>Sat: **98** %) (EtCO<sub>2</sub>: **20** mmHg)

**Circulation**  
 Cardiac Rhythm: **Sinus**

Heart Rate: **140** bpm  
 Sinus Arrhythmia  
 Heart Sound: **atrial septal**

Blood Pressure: **60/40** mmHg  
 Korotkoff S: R L  
 Disabled Pulses:  
 Brachial R  L   
 (Temperature: **37.5** °C)

**Appearance** Oyanosis Level:  Crying

**Airway** Upper Airway Sound: **Other** (Temperature: **37.2** °C)

**Breathing** Respiratory Pattern: **Left Lung** (O<sub>2</sub>Sat: **95** %) **Right Lung** (EtCO<sub>2</sub>: **mmHg**)  
 Sound:  Rise  Fall  
 Sound:  Rise  Fall  
 Inspiratory Time:  %

**Circulation** Cardiac Rhythm: **Left Lung**  
 Heart Rate:  bpm  bpm  % change  
 Heart Sound:   Sinus Arrhythmia  
 Blood Pressure: **Systolic**  / **Diastolic**  mmHg  
 Disabled Pulses:  
 Brachial right  
 Brachial left

Clear Settings Load Palette Item... Save as Palette Item...

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**Details** **Palette** **Scenario** **Model** **Log**

**Apply** **NOW** **10 sec** **30 sec** **1 min** **2 min** **5 min** **59:59** **Edit...**

**Clocks** **Evaluation** **Care Provided:** **SATISFACTORY** **UNSATISFACTORY** **SATISFACTORY**  
 Transition Remaining: **00:00:00**  
 Session: **00:02:35** **< Add to Log**

**Power** **ON**

Use our preprogrammed scenarios, modify them, or quickly create your own. Use our physiologic modeling or specify trending.

Newborn Hel User Interface - Neonatal Scenarios

File Setup Monitor Help

### Status

**Appearance**  
 Skin Color:  Crying  
 Airway:  none  
 Throat Sound:  none

**Breathing**  
 Resp. Pattern: normal  
 Resp. Rate: 0 /min  
 % Inspiration: 5  
 Chest Rise: R  L   
 Lung Sounds: Right normal Left normal  
 (O2 Sat: 84 %) (ECG2: D) (mmHg)

**Circulation**  
 Cardiac Rhythm: Sinus  
 Heart Rate: 78 bpm  
 Sinus Arrhythmia  
 Heart Sound: normal  
 Blood Pressure: 44/29 mmHg  
 Korotkoff S: R L  
 Disabled Pulses: Brachial R  L   
 (Temperature: 37.0 °C)

### Details | Palette Scenario | Model | Log

Clear Load Scenario... Save Scenario... Scenario Auto-Responses...

**Cynthia's baby**  
 Male infant with central cyanosis, limp, flaccid and requires immediate resuscitation. No spontaneous movement of right arm is noted. Slat CXR reveals a fractured right

Name	Transition	Description
Cynthia's baby	00:00	
Cardiopulmo decline	00:30	HR/BP -20%, O2Sat=80
Wait Indefinitely	...	Chest decompression expected
Lungs enabled	01:00	HR, BP +20%
Wait Indefinitely	...	Resuscitation expected
Normal cardiopulmo	02:00	RR=50, O2Sat=98, HR=135, BP=62/43

Add to Scenario...

Selected Item:

Playing: Cardiopulmo decline

**Power**

**Evaluation**  
 Care Provided:    
 Note:

**Clocks**  
 Transition Remaining: 00:00:26  
 Session: 01:11:29

Use this hypoxic model which is responsive to actions of care providers or retain control of the newborn's motion, color and vital signs

Newborn Hal User Interface - Defaults Profile

File Setup Monitor Help

**Status** | **Appearance** | **Breathing** | **Circulation**

Skin Color:  Crying

**Airway**  
Throat Sound: none

**Breathing**  
Resp. Pattern: normal  
Resp. Rate: 0 /min  
% Inspiration: 5  
Chest Rise: R  L

Lung Sounds:  
Right: normal  
Left: normal  
(O2 Sat: 98 %)  
(EtCO2: 0 mmHg)

**Circulation**  
Cardiac Rhythm: Sinus  
Heart Rate: 100 bpm  
 Sinus Arrhythmia  
Heart Sound: normal  
Blood Pressure: 25/15 mmHg  
Korotkoff S.: R  L   
Disabled Pulses: Brachial R  L   
(Temperature: 37.5 °C)

**Details** | **Palette** | **Scenario** | **Model** | **Log**

**Gaumard®**

Model warp-factor: 1

Modeled Therapy:  
Oxygen: [ ] L/min  Flow on   
Epinephrine: 0.04 mg dose onboard: 0 mg/kg   
\*Therapy can also be indicated on Log page.

Patient Condition:  
 Hypoxia OFF (adequate umbilical perfusion / spontaneous breathing)  
 Hypoxia ON (compromised umbilical perfusion / apnea)

Healthy | Mild Cyanosis | Severe Cyanosis

CPR Monitor:  
VENTILATION [Progress Bar]  
COMPRESSION [Progress Bar]

0 10 20 30 40 50 60 sec

**Clocks**  
Transition Remaining: 00:00:00  
Rearming: 00:00:00  
Session: 00:16:56

**Evaluation**  
Note: [ ]  
Care Provided: [ ]  
UNSATISFACTORY | SATISFACTORY

**Power**  ON

Real time performance log tracks the actions of up to six care providers. Actions are logged and time stamped.

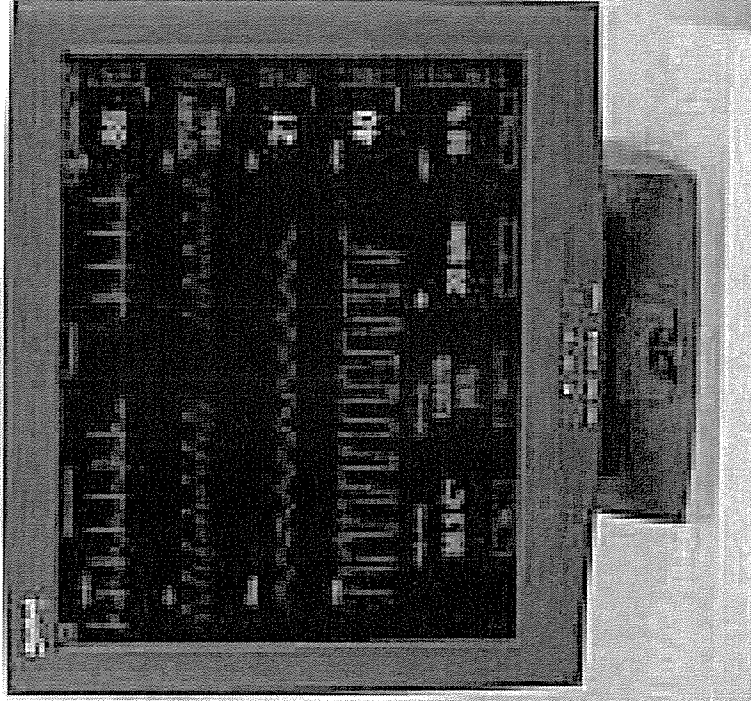
The screenshot displays the Gaumard Neonatal Scenarios software interface. At the top, the title bar reads "Newborn Vital User Interface - Neonatal Scenarios". The main window is divided into several sections:

- Status:** Shows vital signs: Skin Color (none), Crying (checked), Airway (none), Breathing (normal), Resp. Rate (0 /min), % Inspiration (0), Chest Rise (R, L), Lung Sounds (Right: normal, Left: normal), (O2 Sat: 82%), (EtCO2: 7 mmHg), and Circulation (Sinus).
- Appearance:** Includes Heart Rate (80 bpm), Sinus Arrhythmia (checked), Heart Sound (normal), and Blood Pressure (37/29 mmHg).
- Transition Remaining:** 00:00:00.
- Session:** 00:02:22.
- Navigation:** Details, Palette, Scenario, Model, Log.
- Providers:** Charles Parker, Benny Goodman, Dave Brubeck.
- Facilitator:** [Empty field]
- Basic:** Assess responsiveness, Call for assistance, Check Tone, Check Color.
- Airway:** Determine patency, Open airway, Inubation Evaluation...
- Breathing:** Airway management, Inubation check, Ventilate, Exubate.
- Circulation:** Yagal maneuver, Attach electrodes, Check for pulses, Interpret rhythm, Establish IV.
- Medication:** Drug, Dose, Units, Route, Administered.
- Log:** A scrollable list of actions with timestamps:
  - 00:00:14 Applied (00:30): Scenario Cynthia's baby - Cardiopulmo decline {Details: HR -20%-20% change; }
  - 00:00:21 [Charles Parker] Action (Assess responsiveness)
  - 00:00:28 [Charles Parker] Evaluation (Care Provided): SATISFACTORY
  - 00:00:38 [Benny Goodman] Action (Check Color)
  - 00:00:44 Applied ( ... ): Scenario Cynthia's baby - Wait Indefinitely {Details: }
  - 00:00:58 Detected (ventilation): integral=200, peak=40, duration=0.4 seconds.
  - 00:01:25 [Dave Brubeck] Action (Open airway)
  - 00:01:31 Action (Determine patency)
  - 00:02:03 Detected (ventilation): correct
  - 00:02:19 Detected (ventilation): correct
- Evaluation:** Care Provided: SATISFACTORY.
- Power:** ON.



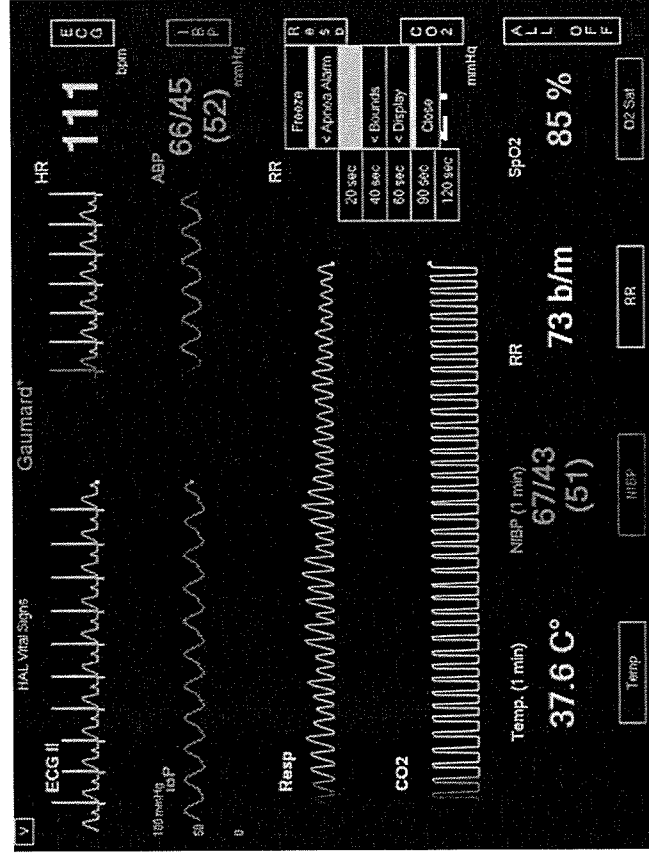
## Newborn HAL is also available with this simulated NICU monitor

- 17 inch touch screen with wireless control
- Dynamic waveforms for ECG, invasive BP, respiration, carbon dioxide
- Numerics for temp, NOBP, respiration rate and oxygen saturation

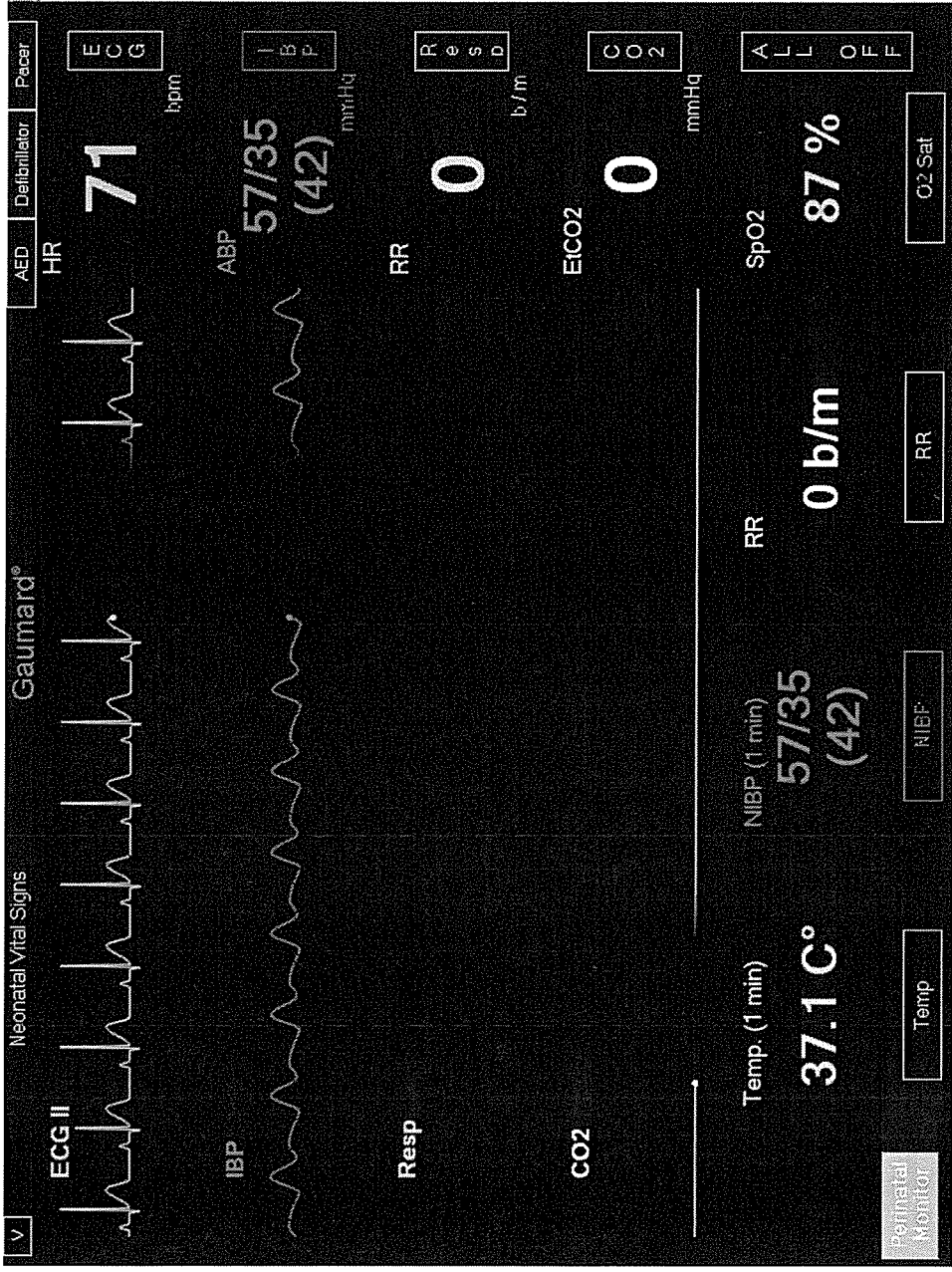


Newborn HAL is also available with this completely mobile simulated NICU monitor

- 11 inch touch screen and wireless control
- Attach to neonatal transporter
- Includes recharger
- Same simulated dynamic waveforms and numerics



Begin resuscitation efforts on Newborn HAL whose motion, color, and vital signs are responsive to your life saving interventions



# Additional information

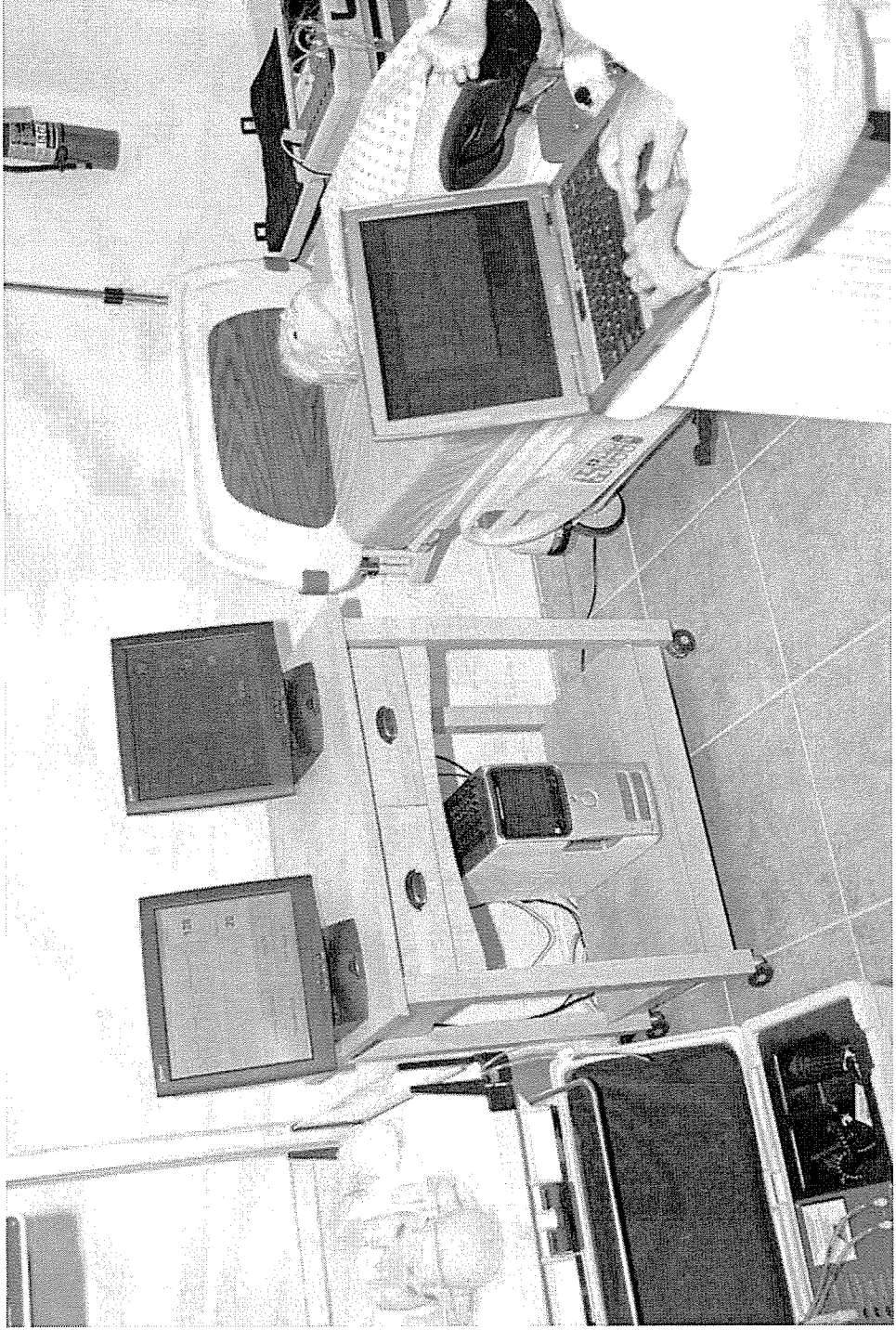
- Contact Gaumard Scientific
- USA 800.882.6655
- Worldwide 305.971.3790
- [www.gaumard.com](http://www.gaumard.com)

# NOELLE 565 Maternal and Neonatal Birthing Simulator

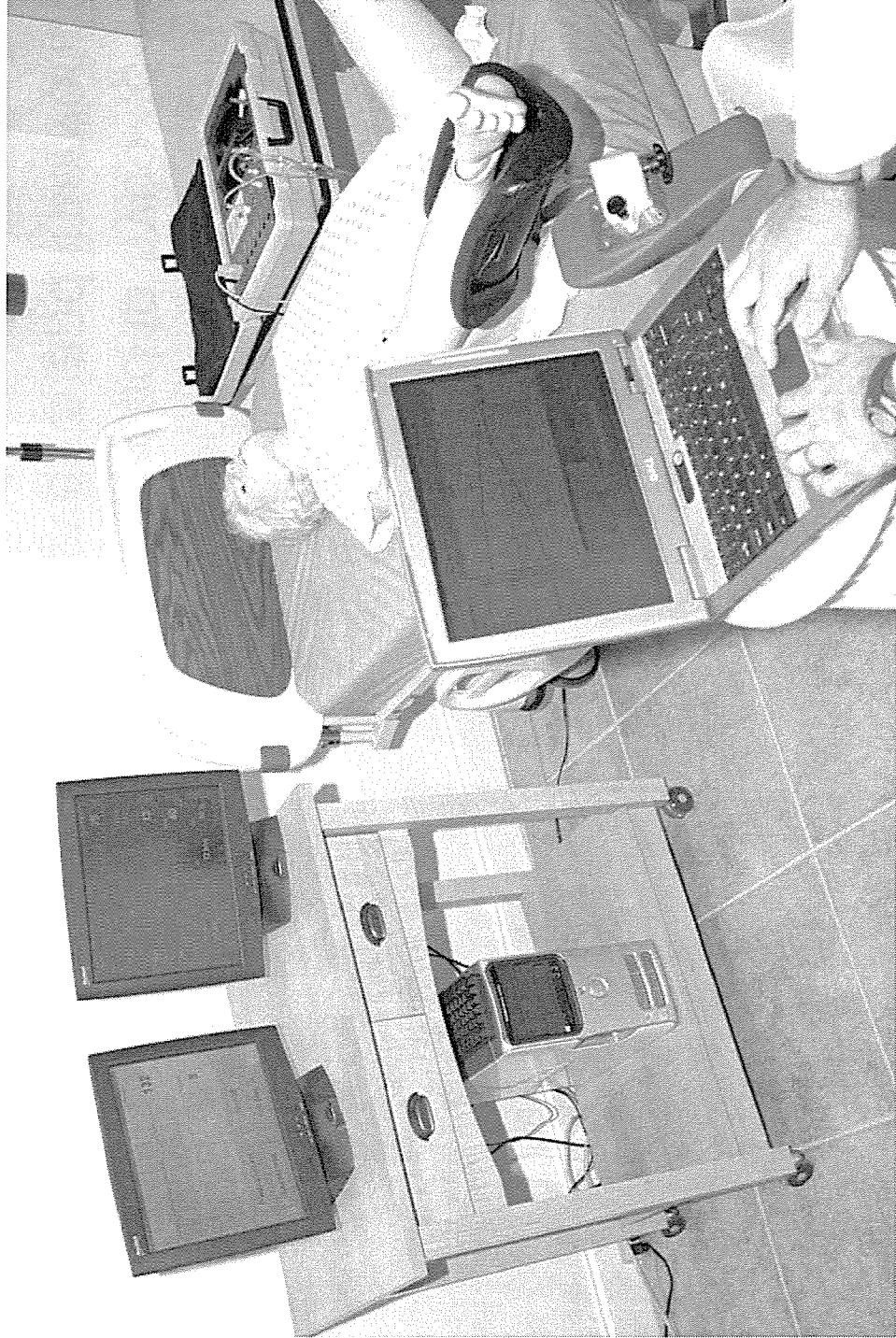
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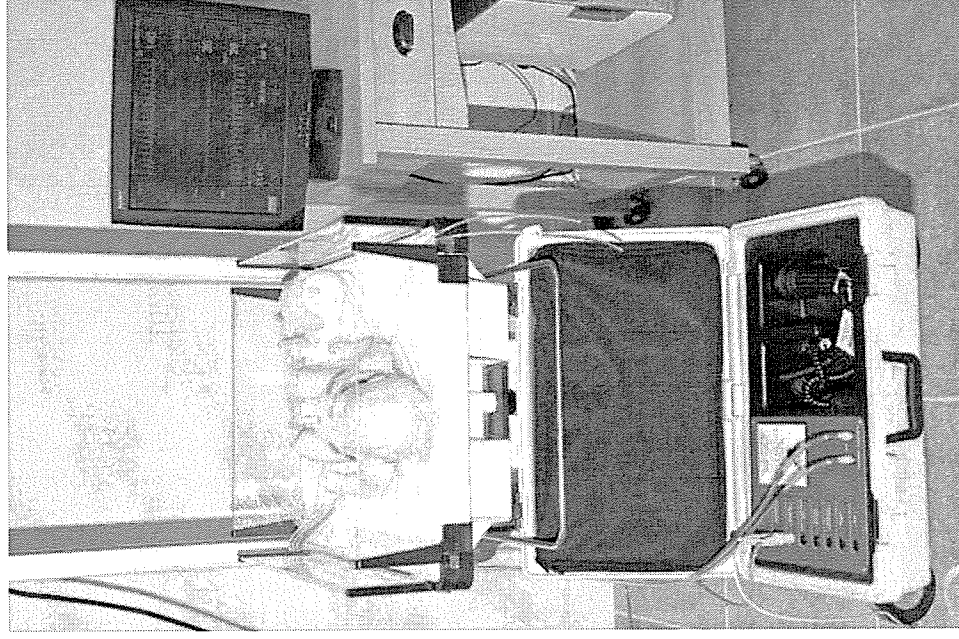
NOELLE combines emergency care with obstetrics for managing complications in pregnancy and childbirth



Instructor controls NOELLE's delivery as well as the fetal monitor, and maternal monitor



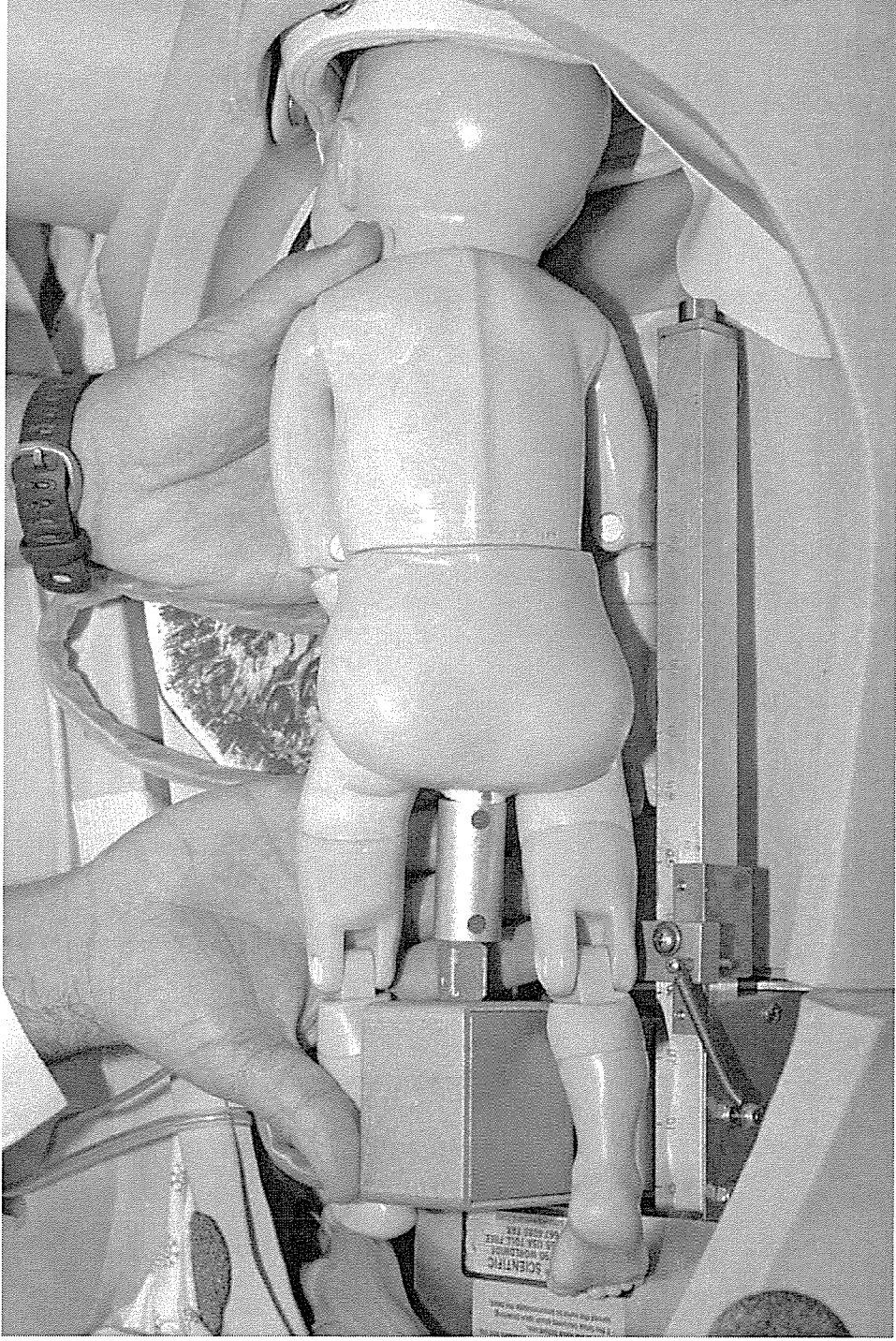
## NOELLE includes a computer interactive 40 week newborn and simulated vital signs monitor



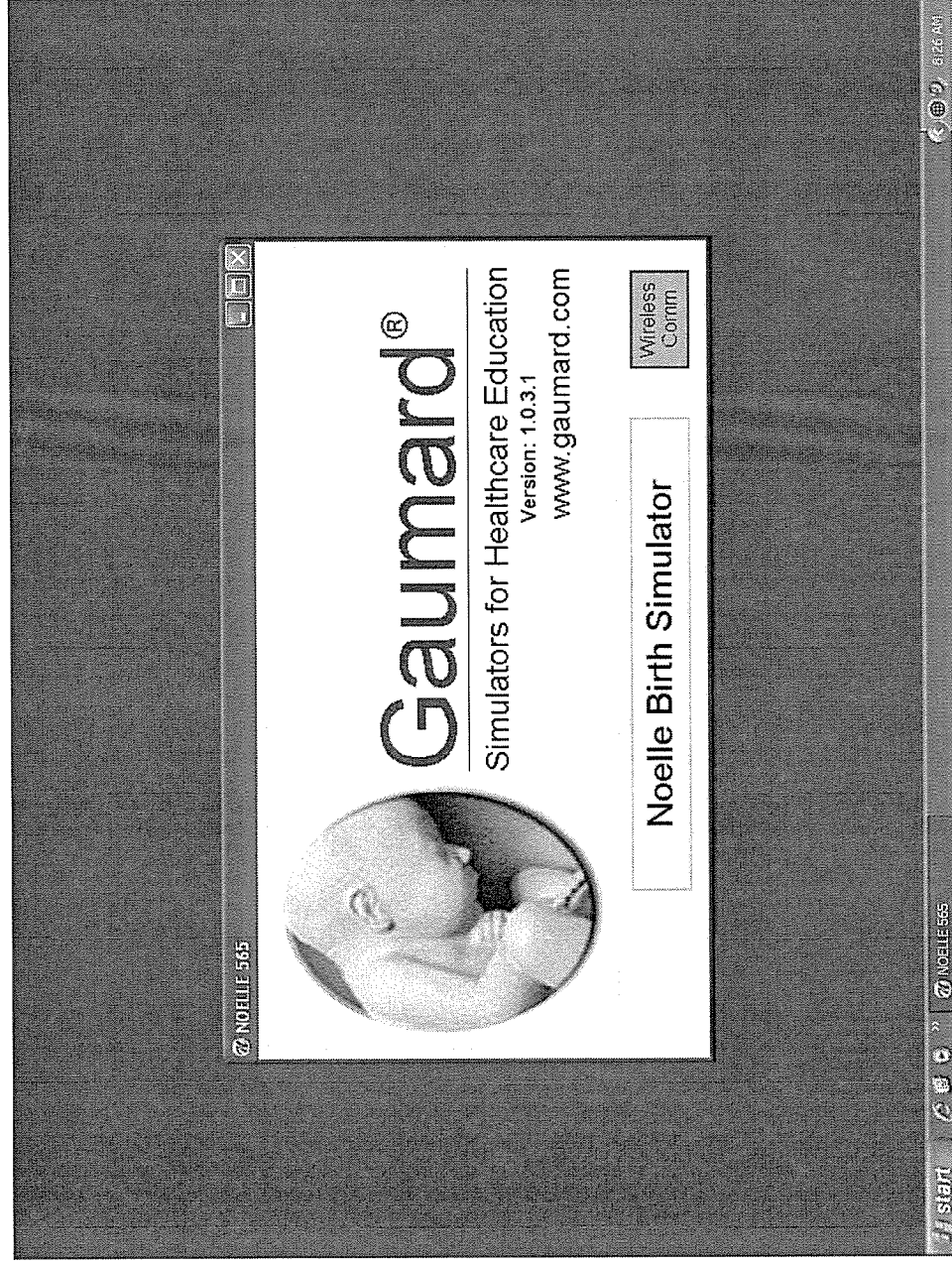
- Fetal monitor converts to the neonatal monitor with a click of the touchscreen
- Instructor may choose physiologic modeling or simple trending
- Color and vital signs respond to hypoxic events and interventions
- Intubate, Umbi, IV, IO
- ECGs



Delivery mechanism provides elements of cardinal movements. ROA positioning shown. LOP and breech also possible. Select our scenarios, modify them, or create your own,



Instructor's laptop controls the NOELLE delivery as well as the fetal monitor and both the maternal and neonatal monitors. The laptop communicates wirelessly with the monitors



The opening screen allows the Instructor to use a preprogrammed scenario, modify those scenarios, or quickly create their own.

**Neonatal Birth Simulator**  
 File Case Options Help

Status Components

**Maternal Vitals**

Vitals  
 Rhythm: Sinus  
 HR: 75  
 IBP: 120/80  
 RR: 13  
 Insp.: 33  
 OSat: 98  
 Temp.: 37.5  
 EtCO2: 40  
 Obs. Air.: NO

**Perinatal Neonatal**

UA  
 Interval: 2 sec  
 Duration: 30 sec  
 Intensity: 60 mmHg  
 Coupling: NO

FHR  
 Baseline: 140 bpm  
 Variability: Average  
 Intensity: Average  
 Periodic: None  
 Spont. Accel: None  
 Prolonged Accel: NO  
 Prof. Decel: NO  
 Mild Decels: NO  
 Severe Decels: NO

Details | Palette Scenario | Model | Maternal CPR | Log |

Clear Scenario | Save Scenario | Load Scenario | Delivery duration: 6 Hr | Turn ON Dystocia

DESCENT

DILATION

STAGE: LATENT ACTIVE 3

Clocks Warp Factor: 1 (660 min)  
 Real Time: 00:00:13  
 Simulation Time: 00:00:00

Start | Reset | Evaluation | UNSATISFACTORY | SATISFACTORY | Main

Note: <- Add to Log

Cynthia is a preprogrammed scenario dealing with shoulder dystocia. The NOELLE Guide describes the scenario, provides readings as well as tests and answers.

