HAL® S3201
Advanced Multipurpose Patient Simulator

- Programmable airway and lung compliance
- Myocardial infarction modeling
- Automated physiology and drug recognition
- Real monitoring: mechanical ventilators, 12-Lead ECG, AED, oximeters, capnometers, and auto-BP
- eCPR™ - effectiveness monitoring and trainer
- Wireless and tetherless mobility for care in motion training
Train general and specialized practitioners with one patient simulator that does it all.

- Active eyes
- Cyanosis
- Nasal/Oral intubation
- Intubation Sensor
- Tongue edema
- Pharyngeal swelling
- Laryngospasm
- Surgical airway
- Real EtCO₂
- Spontaneous breathing
- Variable airway resistance
- Variable lung compliance
- Gasping
- Heart Sounds
- Carotid pulses

- Brachial/axillary pulses
- Radial pulses
- Femoral pulses
- Popliteal pulse
- Pedal Pulse
- Bowel sounds
- Seizures
- Streaming Voice
- Airway sounds
- Mainstem intubation
- Needle decompression
- Bilateral chest tube
- Ventilation sensor
- Lung sounds
- Chest compression sensor

- (Manual/Auto) Blood pressure
- 12-Lead Monitoring
- Oxygen saturation
- Defibrillation/pacing
- Bilateral IV/IM access
- Drug recognition
- Stomach distension
- Intramuscular access
- Urinary Catheterization
- Optional trauma arm/leg
- 6-hour battery life
- Wireless and tetherless
HAL® S3201 | Advanced Multipurpose Patient Simulator

HAL features the most advanced capabilities in patient simulation in one affordable package.

MULTIPURPOSE
HAL offers an array of physiological features capable of simulating lifelike cases in nearly all clinical settings, including prehospital, ED, OR, ICU, PACU, and general nursing. HAL’s versatility makes it the most advanced and cost-effective patient simulation solution today.

REAL MONITORING
Monitor and provide care using native equipment. HAL supports real 12-Lead ECG monitors, capnometers, oximeters, BP cuffs, defibrillators, and mechanical ventilators just like a real patient. No adapters, adjuncts, or special configuration required.

TETHERLESS
HAL’s tetherless and wireless design allows for point-of-injury care, transport, and patient handoff training. HAL is self-contained, quiet, and fully operational on battery power for up to 6 hours.

PROVEN RELIABLE
Since 2004, our industry-leading design and wireless technology made the HAL series an effective and reliable tool for our users. The HAL S3201 is the evolution of the HAL S3000 design awarded the certificate of airworthiness by the US Army.

EASY TO USE
Our intuitive UNI® software lets you quickly and easily manage HAL’s vitals using on-the-fly controls and interactive scenarios, while the physiological model in the “automatic operating mode” handles the effects of medications, so that you can focus on the learners’ actions.

TURN-KEY SOLUTION
HAL is fully equipped and ready for use. HAL includes a wireless control tablet, UNI®, a virtual patient monitor, a scenario library, and accessories for one great price. The commitment to providing innovative technology and value is still our principle today as it was over 50 years ago.

DYNAMIC AIRWAY AND LUNG COMPLIANCE
Train learners on vent management and patient treatment using a real mechanical ventilator. HAL’s respiratory controls let you adjust lung compliance, airway resistance, gasping, real EtCO2, and OSAT to simulate an infinite number of respiratory conditions. HAL can also hold PEEP from 5 to 20 cmH2O and trigger the vent’s assist mode during weaning.

12-LEAD ECG DESIGN WITH MI MODEL
Train ECG interpretation and MI management using real native 12-lead equipment. Select rhythms from the built-in library, design your own using the point-by-point PQRST wave editor, or create an occlusion on the 3D heart model to auto-generate injury, ischemia, and necrosis.

AUTOMATIC RECOGNITION OF 50+ VIRTUAL DRUGS
Train medication administration and management to improve patient safety. The drug recognition sensors integrated into the arm vasculature detect the medication type, concentration, and dose administered. In response, the physiological model automatically simulates the effect on the patient.
**UNI® SOFTWARE**

- Unified Simulator Control Platform - UNI’s interface design is shared across our growing line of 15+ computer controlled patient simulators, so you can easily operate any Gaumard products without retraining, thus saving your program valuable time and money.
- Preconfigured and ready - UNI comes preloaded and preconfigured in the rugged 12” wireless tablet PC included with the package.
- 3D Patient Visualization Monitor – This real-time 3D view of the patient ensures you never lose track of provider/patient interaction during the simulation.
- Unified Scenario Designer – Create your own scenarios quickly and easily and share them with other UNI users and between Gaumard products.
- Time-stamped event recording and reporting
  The automated event tracking and interaction recorder ensures important events are always captured so you can focus on the action.
- Control View Replay – The built-in recorder captures UNI’s screen as data so you can review the simulation from the operator’s chair.
- No annual operating license or software update fees
  - Keeps your program’s operating costs down year after year.

**AUTOMATIC MODE**

The UNI physiological model can automatically simulate lifelike responses to cardiorespiratory events, gas and blood composition, medications, and much more, without input from the operator.

**VITAL SIGNS MONITOR**

- Includes 20-inch touchscreen virtual monitor or upgrade to a 12-inch tablet virtual monitor
- Customize each trace independently; users can set alarms, and timescales.
- Display up to 12 numeric values including HR, ABP, CVP, PAWP, NIBP, CCO, SpO2, SvO2, RR, EtCO2, temperature, and time
- Select up to 12 dynamic waveforms including ECG Lead I, II, III, aVR, aVL, aVF, V1, V2, V3, V4, V5, V6, AVP, CVP, PAWP, pulse, CCO, SvO2, respiration, capnography.
- Share images such as x-rays, CT scans, lab results, or even multimedia presentations as the scenario progresses

**3D MYOCARDIAL INFARCTION**

Train to improve MI diagnosis, management, and prognosis. Simply point-and-click on the 3D heart to create an occlusion to auto-generate MI visible on a real 12-lead ECG reading.

**eCPR™ MONITORING**

Monitor and assess CPR performance in real-time, simulate perfusion dependent on effectiveness, and export performance reports for debriefing.

**Powered by Microsoft® Surface Pro**
HAL®, a multipurpose patient simulator for all your clinical training needs that’s easy to use.

**REACTIVE EYES, SEIZURES**
HAL has blinking eyes with photosensitive pupils. Control dilation, reactivity, and blink rate to simulate injury and state of consciousness.

**SURGICAL AIRWAY**
Visible tongue edema, pharyngeal swelling, and laryngospasm. Perform an emergency cricothyrotomy or tracheotomy.

**WIRELESS STREAMING VOICE**
Be the voice of HAL and hear caregiver responses. Create and store vocal responses or select from 80+ prerecorded phrases.

**eCPR™ AND REAL EtCO₂**
Built-in ventilation and chest compression sensors capture CPR quality metrics. Measure EtCO₂ using a real capnometer to monitor effectiveness.

**DEFIBRILLATION**
Monitor, capture, pace, and cardiovert using a real defibrillator, electrodes, and real energy. Alternatively, save money on replacement pads by connecting the defibrillator directly to HAL using our optional hands-free training cables.

**AUSCULTATION**
Present normal and abnormal airway sounds, heart sounds, anterior and posterior lung sounds, and bowel sounds.

Central Cyanosis
Reactive Eyes
Oral and Nasal Intubation
Dynamic Airway and Lung Compliance
12 Lead ECG
Automatic Chest Rise
Realistic Surgical Trachea
Defibrillate, Cardiovert, and Pace Using Real Devices
Measure OSAT and Blood Pressure Using Real Oximeter and Cuff
heart rate
- Bilateral IV arms with fill/drain sites
- SubQ and IM injection sites
- Intraosseous access at tibia
- ECG monitoring using real devices
- Defibrillate, cardiovert and pace using real devices
- Multiple heart sounds, rates, and intensities
- ECG rhythms are generated in real time
- Bilateral carotid, radial, brachial, femoral, popliteal and pedal pulses synchronized with ECG
- Pulses vary with blood pressure, and are continuous and synchronized with the ECG even during a paced rhythm

INSTRUCTOR OR AUTOMATIC MODE
- Vital signs are generated in real time
- Drug library with medications
- Use of medications change conditions in real time mimicking real clinical situations

DRUG RECOGNITION SYSTEM
- Identifies drug type and volume injected into veins of the right hand and forearm
- Supplied with 20 syringes having wireless tags
- Use drugs from library or choose to model other drugs using software template

NEURAL RESPONSES
- Eyes are controlled automatically by physiologic model or directly by the instructor
- Select pupillary response to light

SPEECH
- Wireless streaming audio
- Create and store vocal responses in any language

VITAL SIGNS MONITOR
- Controlled via wireless tablet PC
- Use selected configuration or create your own configuration to mimic the real monitors used in your facility
- Share images such as ultrasounds, CT scans, lab results
- Touchscreen control
- Monitor can be configured by the instructor to suit the scenario

OTHER
- Central cyanosis
- Fill bladder and perform Foley catheterization
- Interchangeable genitalia
- Insert feeding tubes
- Auscultate bowel sounds

ARTICULATION AND MOVEMENT
- Realistic joint articulation
- Supports supine, prone, recumbent, and sitting positions
- Seizure/convulsions

USER INTERFACE
- Sensors track student actions
- Changes in condition and care provided are time stamped and logged
- Supplied with wireless tablet PC
- 26 preprogrammed scenarios which can be modified by the instructor even during the scenario
- Create your own scenarios (add/edit)
- Change the simulator’s condition during the scenario