Gaumard®
Simulators for Health Care Education

HAL® S5301

The world's most advanced interdisciplinary patient simulator

International product features

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General

- Anatomically accurate adult male proportions; height 5' 9" / 175 cm[1]
- Lifelike skin features palpable landmarks and seamless articulating joints: neck, jaw, shoulders, elbow, wrists, fingers, hips, knees, ankles
- Realistic articulation supports common patient positions: supine, prone, Fowler's
- Wireless and tetherless; all features are fully operational during transport[2]
- Internal rechargeable battery provides hours of tetherless operation[3]
- Microsoft Surface Pro preloaded with UNI® 3.0 Unified Simulator Control Software
- HAL S5301 Simulation Learning Experiences™ scenario package
- Supports Bluetooth, Gaumard RF, and wired connectivity[4]
- Compatible with Gaumard Ultrasound™
- Compatible with Care in Motion™ audio & video debriefing system
- Available in light, medium, or dark skin tone at no extra charge[5]

Neurologic

- Programmable blinking rate, pupil dilation, and eye movement
- Programmable consensual and nonconsensual pupillary response to light stimuli
- Normal and abnormal eye movements and conditions including strabismus, ptosis, and more
- Interactive eyes can follow a moving object
- Wireless streaming voice: be the voice of HAL and listen to participants' responses in real-time[6]
- Includes large library of high-quality, prerecorded English and Spanish responses
- Record and playback custom speech phrases in any language
- Active mouth movement synchronizes with voice: close, open, smile, unilateral lip droop, and lockjaw
- Active neck movement: rotation, flexion, extension, and reduced cervical movement
- Sound localization: HAL automatically turns head and eyes toward the provider speaking
- Active robotics simulate lifelike expressions; preset library includes left facial droop, right facial droop, pained, quizzical, scared, smiling
- Preprogrammed emotional states automatically express non-verbal cues: normal, worried, anxious, and lethargic
- Active right arm motor reflex: shake hand, squeeze hand, raise hand, withdrawal response, and abnormal posturing (decorticate/ decerebrate)
- Lifelike stroke clinical presentations include facial droop, weakness in the right arm, abnormal posturing, and pain response
- Programmable, automated pain response to pressure sensitive sites: bilateral supraorbital notch, trapezius pinch (left shoulder), sternal rub, and right middle finger nailbed
- Supports Train of Four monitoring using real devices
- Lifelike partial tonic-clonic and non-tonic-clonic seizures
- Programmable sweating (diaphoresis) and tears

Airway

- Anatomically accurate oral cavity and airway
- Normal and abnormal airway sounds synchronized with spontaneous and/or assisted ventilations
- Supports airway management using standard adjuncts including endotracheal tube (ET), supraglottic airway devices, laryngeal tube, oropharyngeal airways (OPA), and nasopharyngeal airways (NPA)
- Programmable difficult airway: tongue edema, laryngospasms, and pharyngeal swelling
- Endotracheal intubation placement detected and logged
- Right mainstem intubation automatically presents anatomically correct unilateral chest rise
- Supports "can't intubate/can't ventilate" scenarios
- Surgical airway supports tracheotomy, cricothyrotomy, and retrograde intubation
- Supports oral, nasopharyngeal, and tracheostomy suctioning exercises[7]

Breathing

- Lifelike, spontaneous breathing with selectable normal and abnormal patterns
- Four anterior and posterior lung auscultation fields; new lung sound library
- Programmable bilateral or unilateral chest rise
- Fully internal, patented dynamic lungs and airway support the use of real mechanical ventilators and standard patient circuits; no calibration, proprietary adapters, or external converter adjuncts required
- Supports standard mechanical ventilators and modes of ventilation including:
  - » Continuous mandatory ventilation (CMV), volume assist/control, pressure assist/control, pressure support ventilation (PSV), pressure or volume controlled synchronized intermittent mandatory ventilation (SIMV), continuous positive airway pressure (CPAP)
  - » Supports therapeutic levels of PEEP
- Programmable advanced airway and lung functions
  - » Variable lung unit compliance
  - » Variable bilateral and unilateral bronchi resistance
  - » Inspiratory effort and rate
  - » Respiratory drive
  - » Real CO_2 exhalation
  - » Auto-PEEP
- Advanced respiratory effort simulation allows for lifelike weaning/liberation scenarios
- Supports mechanical ventilation while fully mobile
- Left hemo/pneumothorax site supports palpation, incision, chest tube insertion, chest tube placement detection, bleeding, and suture
- Needle thoracentesis site supports needle insertion, detects needle placement, and presents audible hiss
- Presents normal to abnormal capnography waveforms on real devices, including "shark fin" waveform

Cardiac
- Aortic, pulmonic, tricuspid, and mitral auscultation fields and new heart sound library
- Supports 4-lead and 12-lead ECG monitoring using real monitoring devices
- Generate cardiac injury, ischemia, and necrosis using the UNI® 3D Myocardial Infarction Model; monitor resulting abnormal ECG rhythms on a real 12-lead ECG monitoring device
- Customize 12-lead waveforms with 12-lead ECG designer interface
- ECG-derived respiratory monitoring
- Supports standard defibrillation, double sequential defibrillation, cardioversion, and pacing with live energy
- Allows for anterior/lateral and anterior/posterior pad placement
- eCPR™ real-time quality feedback and reporting: Time to CPR, compression depth/rate, compression interruptions, ventilation rate, excessive ventilation, smart CPR coach

Circulation
- Bilateral palpable pulses: carotid, brachial, radial, femoral, popliteal, pedal
- Pulse palpation detection and event logging
- Programmable circumoral skin coloration: cyanosis, redness, and pallor
- Programmable oxygen saturation; monitor using real pulse oximetry sensors on the left middle finger
- Supports non-invasive auscultatory and oscillometric blood pressure measurement with real monitors and devices
- Monitor intra-arterial blood pressure using real adjuncts, sensors, and devices
- Bilateral IV access sites support cannulation with flashback, infusion, and sampling
- Radial arterial access site supports catheterization, flashback, sampling, and IBP monitoring
- Antecubital vein blood draw site on left arm
- Automatic drug recognition detects virtual medications injected into the lower left arm
- Fingerstick glucose testing on the left index finger
- Tibia and humeral intraosseous access and infusion
- Programmable capillary refill time testing located on right middle finger
- Intramuscular injection site on left deltoid

Genitourinary
- Male urinary catheterization with programmable fluid return
- Computer-controlled urinary output rate and urine and/or blood mixture
- Programmable urinary incontinence
- Internal, auto-refilling 0.7 liter urine reservoir

Gastrointestinal
- Four bowel auscultation fields and new bowel sound library
- Visible gastric distention during excessive bag valve mask ventilations and/or esophageal intubation

Trauma
- Internal, auto-refilling 1.2 liter blood reservoir
- Abdominal bleeding wound responds to pressure and packing
- Optional trauma arm and trauma leg accessories feature bleeding wound and tourniquet placement detection
- Computer-controlled blood pressure-dependent bleeding

HAL® S5301 - Advanced Interdisciplinary Patient Simulator Package (International)

S5301-I.PK

HAL S5301 patient simulator, Microsoft Surface Pro tablet preloaded with UNI 3.0, RF communications module, HAL S5301 Simulated Learning Experiences™ Scenario Package, Facilitator's Guide, abdominal wound insert, patient simulator accessories, 2-Year Limited Warranty[8]

Gaumard Ultrasound™ System

30081159A

Package includes Gaumard Ultrasound laptop, transducer, Gaumard Ultrasound software license, and transport case.

HAL® S5301 Emergency Ultrasound POCUS/eFAST Pathologies Module

30081347A

HAL S5301 Emergency Ultrasound POCUS/eFAST Module software license for Gaumard Ultrasound.

Traumatic Right Arm Amputation

30011856A

Lower right arm with traumatic amputation and pressure-sensitive bleeding site.

Traumatic Left Leg Amputation

30011859A

Lower left leg with traumatic amputation and pressure-sensitive bleeding site.

Gaumard Vitals™ Bedside Virtual Monitor

30080154B

Bedside, customizable virtual patient monitor. Package includes preconfigured all-in-one PC and one Gaumard Vitals patient simulator license.

Gaumard Vitals™ Portable Virtual Monitor

30081003A

Portable, customizable virtual patient monitor. Package includes preconfigured tablet PC and one Gaumard Vitals patient simulator license.

Care in Motion™ Mobile Video Debriefing System

CIM.PK

Care in Motion Tablet PC, 3 battery-powered HD wireless cameras, 3 adjustable camera grips, and transport case. One-Year Limited Warranty.

Learn more and request a quote at Gaumard.com/HAL-S5301

HAL® S5301

Gaumard®
Simulators for Health Care Education

Gaumard.com
Worldwide +1.305.971.3790
Toll-Free USA & Canada 1.800.882.6655

1. Patient simulator approximate physical dimensions: height 5' 9" / 175 cm, weight 135lbs / 61kg. 2. Maximum wireless range will vary depending on environmental factors and conditions. 3. Battery life estimates are dependent on active features and settings; results may vary. 4. Some audio features are not available in long-range RF wireless mode. 5. Skin tone selection is available at the time of order only. 6. Streaming voice wireless range is dependent on environmental factors and conditions, including Gaumard RF link strength and interference. 7. Dry exercises only; fluid insertion into the nasal and oral cavity is not supported. 8. Warranty coverage, service, product installation, and training may not be available in all areas or countries. See authorized distributor for details. Product design is subject to change without notice. 11190157A