# SimMan 3G

# Simulation Quality

## Achieving

## Patient Care

At Laerdal, we believe that simulation training for Healthcare Professionals is pivotal in our common goal to improve patient outcomes.

Simulation provides the opportunity to train staff without risk to patients. The ability to frequently practise and manage complex medical scenarios, helps to prevent medical errors, while detailed feedback promotes discussion and re-enforces the learning process. Simulation will enable your staff to deliver quality patient care with integrity, consistency and confidence.

Laerdal has had five decades of experience creating medical educational products for use by Healthcare Professionals. It is a history and association of which we are proud.

**SimMan** 3G is the next generation of Laerdal simulation. SimMan 3G is a groundbreaking simulation solution. Completely wireless and self-contained, technically advanced and yet so easy to use; there is no patient simulator to rival it.

## Your Needs

Imagine the training benefits of running a complete and continuous medical scenario from the moment of patient injury, at any location, through the challenges of patient transportation and concluding in a hospital; all realistically facilitated by a single patient simulator.









Completely wireless and self-contained, simulation training need no longer to be compromised by location and equipment constraints.

Designed using the most cutting-edge technology, SimMan 3G opens up numerous simulation possibilities for variable locations and mobility. Easy to programme, operate and transport; all aspects of medical training can now be challenged simultaneously and gradient levels of difficulty can be applied to each scenario to build student competence. SimMan 3G is compatible with SimView, which provides comprehensive debriefing support for quality feedback and effective learning.

# SimMan 3G

…. leading the way forward.

# Making Simulation Easier

**- to use**

**SimMan** 3G's intuitive software interfaced with three flexible operating modes, enables novice and expert instructors to create effective simulations more simply and quickly than ever before.

**- to operate**

Whether you are new to simulation training or just need a quick set up solution, the **Automode** feature is revolutionary in facilitating the most automatic way to operate **SimMan** 3G. It combines physiological models, pre-programmed patient cases and an innovative method for managing model based simulation. Instructors can now take advantage of pre-programmed pharmacological responses for over 149 drugs and devices, repeatedly run the most complex cases with ease and adapt difficulties to challenge the skills of every student.

**- to teach**

The new improved **Instructor Mode** has been designed for instructors who like to combine their knowledge and skills with pre-programmed scenarios. Utilising **Instructor Mode On The Fly** gives the more experienced simulation instructor the flexibility to digress at any time. The instructor can now initiate challenges responsively to the needs of each student at any given moment without compromising the flow of the simulation. Exciting features of the Instructor Mode include easy access to the most important vital signs and a new Graphical User Interface (GUI) that makes navigation through the scenario straightforward and effortless.

# Helping you succeed

Laerdal is dedicated to helping you meet and exceed your educational goals. From simulators and scenarios to installation and training; our products and services are designed to help you achieve the optimal training environment with the most realistic outcome possible.

## More than a Patient Simulator

**SimMan** 3G not only operates remotely but can also wirelessly integrate with your existing computer networks. It integrates fully with the complete 'Circle of Learning' intrinsic to all Laerdal products. Video debriefing, patient monitoring, pre-packaged patient cases and scenarios and SimView are just some of the accessories that make **SimMan** 3G a complete simulation solution.

## Education to help maximise your return

**SimMan** 3G is available with a comprehensive range of products and services. These include an instructor-training programme from one of our product training specialists either at your location or at our fully equipped Laerdal Training Centre. Additional professional services include advanced programming courses, customised refresher training courses and scenario development services.

## Protecting Your Investment

While our simulators are recognised for their quality and reliability, for that extra peace of mind, we also offer technical support services that make it easier for you to own, operate and maintain your programmes including preventative maintenance programmes, extended warranties and an optional Laerdal On-Site Service with our field service technician.

## - to programme

**SimMan** 3G's powerful scenario editing capability is built on the tried and tested SimMan software including the same flow diagrams, trends, handlers and events. Scenario writing and validation is simple to learn. Once a custom simulation is prepared, it behaves exactly as the instructor needs time after time so that every student can train in the same standardised way. The software can even include images, sounds and multi-media graphics to enhance the learning of students.

# SimMan 3G

…. leading the way forward.

# SimMan 3G Built to last

Since the launch of Resusci Anne in 1960, Laerdal's lifelike manikins and patient simulators have helped to train an estimated 300 million medical professionals and lay responders around the world to save lives and improve patient outcomes.

Today, Laerdal is internationally renowned for products that not only go beyond user expectations but work well beyond their normal expected life.

SimMan 3G is a testimony to this tradition. It has been designed to withstand use in the harshest of environments to create realistic scenarios.

## SimView

### Improved learning with quality debriefing

The ability to debrief is a critical component of any simulation based Education program. Debriefing helps instructors to review the learners' performance and assess whether the learning objectives have been met.

As with all of Laerdal's simulators, SimMan 3G can be fully integrated with SimView™, Laerdal's video capture and debriefing solution. SimView captures details of student performance within simulations, and compiles the audio, video, patient monitor information and event log data to form a comprehensive debrief file.

SimView can also be integrated to your network to enable debriefing to take place wherever you choose and also allows simulations to be viewed throughout your facility.

Contact your Laerdal representative to learn more about SimView and how to best configure the SimView solution in your facility.
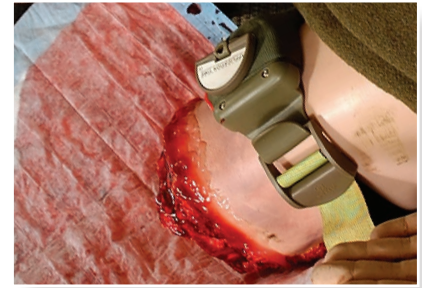
## Quality Debriefing

### Quality CPR Feedback

*Laerdal's Q-CPR technology measures the quality of CPR providing real time feedback on compression rate, depth, release, and hands-off time as well as generating palpable pulses, blood pressure wave forms and ECG artefacts.*
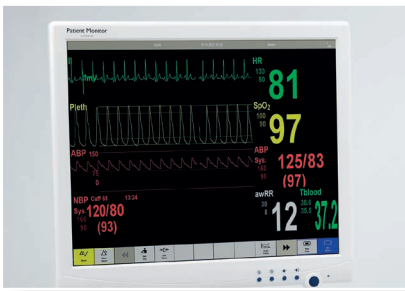


### Convulsions

*Degrees of seizures and convulsions can be created from minor effect through to a full convulsion through the Instructor Mode.*



### Bleeding and Wounds

*Wound models can be connected to an internal blood reservoir which will bleed both from arterial and venous vessels. Connected to the simulator's physiological modelling, SimMan 3G will react appropriately according to treatment.*



### Wireless Monitor

*Part of the complete wireless simulation solution, the wireless monitor enables you to observe the patient simulator's vital signs while moving around freely during training.*
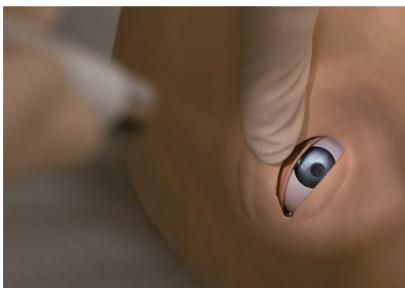


### Secretions

*The new eye secretions feature has multiple scenario applications such as responsive reactions to chemical, biological, radiological and nuclear agents.*



### Drug & Event Recognition

*The new and advanced Drug Recognition System allows students to administer drugs simultaneously. It registers the amount, speed and type of drug automatically and applies the appropriate physiological responses, saving the instructor time and improving the overall intelligent debrief.*



### Eye Signs

*Include pupillary responses to light, blinks at slow, normal and fast rates, winks and open, partially open and closed reactions.*



### Vascular Access

*In addition to the standard vascular access in the right arm, the new intraosseous access via the tibia and sternum allows for procedure accuracy.*



### Chest Decompression & Chest Drain

*Students can now perform a needle Thoracentesis and insert a chest drain bi-laterally.*

# SimMan 3G

.... leading the way forward.

# SimMan 3G

- Completely wireless and self-contained
- Internal electrical and pneumatic power
- Supplemental wired connectivity and power
- Wirelessly integrates with existing computer networks
- Swappable, rechargeable batteries
- Approximately 4 hours continuous operation in wireless mode
- Rugged and reliable for use in multiple environments

**Multiple Airway Skills/Features:**
- Controllable open/closed airway; automatically or manually controlled
- Head tilt/Chin lift
- Jaw thrust w/articulated jaw
- Suctioning (Oral & Nasopharyngeal)
- Bag-mask ventilation
- Orotracheal intubation
- Nasotracheal intubation
- Combitube, LMA, and other airway placement
- Endotracheal tube intubation
- Retrograde intubation
- Fiberoptic intubation
- Transtracheal jet ventilation
- Needle cricothyrotomy
- Surgical cricothyrotomy
- Variable lung compliance – 4 settings
- Variable airway resistance – 4 settings
- Right main stem intubation
- Stomach distention
- Connectivity with third party respiratory simulations

**Airway Complications:**
- Detection of proper head position
- Can't intubate/Can ventilate
- Can't intubate/Can't ventilate
- Tongue edema
- Pharyngeal swelling
- Laryngospasm
- Decreased cervical range of motion
- Trismus

**Breathing Features:**
- Simulated spontaneous breathing
- Bilateral and unilateral chest rise and fall
- $CO_2$ exhalation
- Normal and abnormal breath sounds
  - 5 anterior auscultation sites
  - 6 posterior auscultation sites
- Oxygen saturation and waveform

**Breathing Complications:**
- Cyanosis
- Needle thoracentesis – bi-lateral
- Unilateral & Bilateral chest movement
- Unilateral, Bilateral & lobar breath sounds
- Chest tube insertion - bilateral

**Cardiac Features:**
- Extensive ECG library
- Heart sounds – four anterior locations
- ECG rhythm monitoring (4 wire)
- 12 lead ECG display
- Defibrillation and cardioversion
- Pacing

**Circulation Features:**
- BP measured manually by auscultation of Korotkoff sounds
- Carotid, femoral, brachial, radial, dorsalis pedis, popliteal and posterior tibialis pulses synchronized with ECG
- Pulse strength variable with BP
- Pulse Palpation is detected & logged

**Vascular Access:**
- IV access (right arm)
- Intraosseous access (tibia and sternum)
- Automatic Drug Recognition System

**CPR:**
- Compliant with 2010 Guidelines
- CPR compressions generate palpable pulses, blood pressure wave form, and ECG artefacts
- Realistic compression depth and resistance
- Detection of depth, release and frequency of compressions
- Real time feedback on quality of CPR

**Eyes:**
- Blinking - slow, normal, fast and winks
- Open, closed and partially open
- Pupillary accommodation:
  - synchrony/asynchrony
  - normal and sluggish speed of response

**Other Features:**
- Seizure/Fasciculation
- Bleeding
  - Simulation of bleeding at multiple sites
  - Arterial and venous
  - Vital signs automatically respond to blood loss & therapy
  - Works with various wound modules & moulage kits
- Urine output (variable)
- Foley catheterization
- Secretions
  - Eyes, Ears, Nose, Mouth
  - Blood, Mucous, CSF, etc.
- Diaphoresis
- Bowel Sounds – four quadrants
- Patient Voice
  - Pre-recorded sounds
  - Custom sounds
  - Instructor can simulate patient's voice wirelessly
- Instructor Communication
  - Multiple instructors communicate using integrated voice over IP

**Pharmacology:**
- Automatic Drug Recognition System identifies drug & dose
- Extensive drug formulary
- Automatic or programmable physiological responses

**System Features:**
- Wireless tablet PC controls simulator remotely
- Control multiple manikins from one interface
- Control simulations from anywhere on your network
- Multiple interfaces can control/observe a single simulation

- Instructor Mode
  - Precise control "on the fly"
  - Design & program custom scenarios
  - Create custom events
  - Run pre-packaged scenarios
- Auto Mode
  - Physiological & pharmacological models run pre-packaged simulations
  - Unique, simple controls increase/decrease difficulty & pace
- Simulation controls:
  - Fast forward
  - Pause
  - Rewind
  - Save/Restore
- Profile Editor
- Future prediction & patient outcome display
- Integrated video debriefing
- Data logging
- Instructor comments
- Works with existing SimMan scenarios

**Patient Monitor:**
- Wireless
- Highly configurable
- Includes:
  - ECG (2 traces)
  - SpO2
  - CO2
  - ABP
  - CVP
  - ICP
  - Anesthetic Agent
  - PH
  - PTC
  - PAP
  - PCWP
  - NIBP
  - TOF
  - Cardiac Output
  - Temperature (core & peripheral)
  - Additional and programmable parameters
- X-Ray Display
- 12 Lead ECG Display
- Custom Image Display
- Custom Video Display

**Certifications:**
- UL, CE, FCC, CSA, HMR

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**SimMan 3G includes:**
- SimMan 3G Manikin
- SimMan 3G Software & License
- Operator's Tablet PC
- Simulated Patient Monitor and Software
- Simulated Patient Cables
- Webcam
- Drug Recognition Kit
- Soft Sided Transportation Cases
- Specially Designed Clothing
- 1 Patient Case for AutoMode
- 1 Year Manufacturer's Warranty

**Accessories:**
- Simulated Patient Monitor & Software (Large screen, Panel PC w/power cord)
- SimView
- Wound Modules and Moulage Kits
- Tablet PC Accessory Kit (Monitor, Keyboard, Mouse & Docking Station)
- Portability Kit
- External compressor

**Scenario Packages:**
- SimMan3G Patient Cases: Volume II – for Automatic Mode
- SimMan National League for Nursing Scenarios: Volume I – for Instructor Mode
- SimMan AHA ACLS Scenarios – for Instructor Mode

- SimMan MicroSim Scenario Package – for Instructor Mode
- SimMan Disaster Preparedness Scenarios: Volume I - for Instructor Mode

**Service Packages*:**
- Two Day Introductory Training Course
- Advanced Scenario Programming Course
- Custom One Day Training Package
- Custom Scenario Development Package
- On Site Installation
- Extended Warranty
- Preventative Maintenance
- Loaner Programme

*\* services available may differ between countries*

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*For more product information, please visit* **www.laerdal.com**

## Laerdal
### helping save lives