

*Advanced simulation in emergencies*



## SimMan

The advanced simulator for training in emergencies



**Laerdal**  
*helping save lives*

[www.laerdal.com](http://www.laerdal.com)

## Realistic simulation in teams



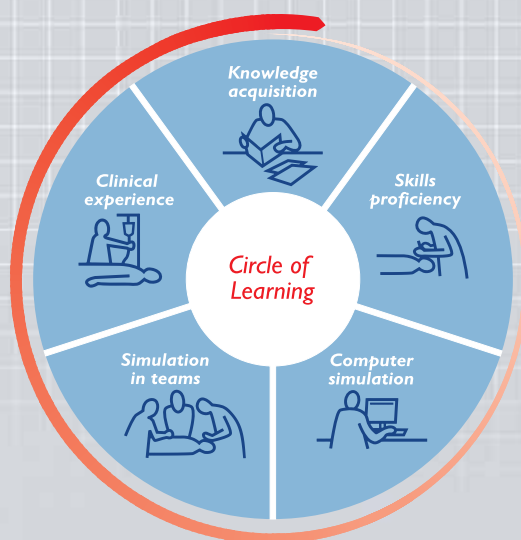
### *Simulation in teams*

In a real emergency, a good outcome for the patient depends on the realism of the rescuer's training and effective practice in teams.

A critical part of the learning process for emergency care personnel is practicing treatment in the same way it occurs in a real emergency. A patient's condition changes over time, depending on the quality and speed of treatment, so should the simulation in practice.

Simulation training is of greatest value to help people practice working together as a team. It helps improve essential communication and coordination skills and so improves effective team treatment. Simulation in teams is therefore an invaluable step in helping save lives.

improves patient safety and outcome



## *helping build competence*

Patient safety and outcome are critically dependent on the competence of healthcare personnel.

Building real competence is a step-by-step process.

It includes acquiring new knowledge and skills, getting used to making quick and safe decisions, training realistically in teams, and gaining clinical experience.

Maintaining and increasing competence is an ongoing process.

Laerdal has been offering learning products responding to evolving needs in emergency medicine ever since the introduction of Resusci Anne in 1960.

Today our range of life saving, cost-efficient learning products includes graphic source materials, innovative skills trainers, interactive computer simulators and advanced patient simulators.

This reflects our belief that helping build competence is a critical part of our mission of helping save lives.

### SimMan features include:

- Full scale patient simulator which allows you to perform relevant ALS skills and scenarios.
- Interactive manikin which gives you immediate feedback to interventions.
- SimMan's enhanced airway offers realistic anatomical landmarks allowing the learner to acquire the necessary skills for accurate placement of airway management devices such as Endotracheal Tubes, Laryngeal Mask Airways and CombiTubes.
- SimMan's patented\* airway system allows accurate simulation of most relevant difficult airway management scenarios.
- Bronchial tree is anatomically accurate in size, colour and texture and features the accurate anatomical landmarks necessary to facilitate realistic fiberoptic bronchoscopy.
- Needle and Surgical Cricothyrotomy.
- Spontaneous breathing.
- Adjustable lung resistance.
- Realistic practise of needle thoracentesis and chest tube insertion.
- Anatomical and physiologically correct carotid, femoral, brachial, radial, bilateral dorsalis pedis and posterior tibialis pulses.
- Pre-programmed library of heart-lung, bowel and vocal sounds with adjustable sound volume.
- Instructor real time voice input through microphone will simulate live communication between patient and care provider.
- Blood pressure may be taken automatically, palpated or auscultated; Krotkoff sounds are synchronised with pulse.
- IV training arm allows practice of peripheral intravenous therapy.
- Interchangeable pupils offer normal, constricted and dilated pupil sizes.
- Realistic male/female genitalia facilitate urologic procedures.

For a complete list of features, please read back page or visit [www.laerdal.com](http://www.laerdal.com)



Realistic skill training feature designed for the practice of chest tube insertion.

### Portable and Flexible

The Laerdal SimMan System is portable and flexible, which allows use in various simulation settings. SimMan can be used in the field for realistic EMS and military scenarios. SimMan can also be transported from the field to the ED or OR in order to simulate the transfer of care from prehospital to hospital clinical settings. Minimal connections, plus laptop and PDA controls allow for quick and easy set-ups and transfer.

### Robust and Reliable

A robust design and durable parts allows SimMan to withstand the rigors of extensive field based simulations, while meeting the advanced clinical training demands of pre-hospital, military and hospital providers. By using the optional wounds, trauma and bleeding control systems, SimMan can effectively imitate the wounds trainees are likely to experience in these environments.



\* US Pat. No. 5.823.787

# SimMan - Advanced simulation in emergencies



The Laerdal SimMan offers educators the ability to provide realistic and challenging scenario based simulation to test learners' critical thinking and clinical decision-making skills.

With realistic anatomy, accurate clinical functionality and PC-software driven operation with integrated video-debriefing, SimMan provides numerous educational opportunities for healthcare professionals.

Some of the many benefits of using SimMan in your training program:

**Educational effectiveness** – provides highly realistic patient simulation for the practice of teamwork, leadership and communication skills.

**Multi function use** – facilitates training for a wide range of health care professionals encompassing all areas of patient care.

**Practice infrequently occurring scenarios** – prepare the learners for the unusual or difficult cases they may face in real life.

**Anatomically realistic** – enables a wide range of emergency medical interventions to be practiced.





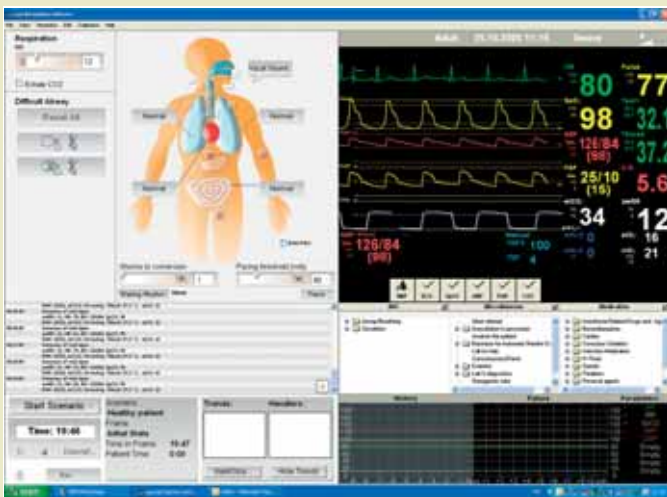
*bringing simulation to life...*



### SimMan Integrated Video Debriefing System

The new SimMan software comes with the world's first Integrated Video Debriefing System. By simply using the included video web-camera with the control computer, the SimMan software will automatically record video and audio and synchronize these with SimMan's log of events. This provides a quick and easy solution to debriefing.

The simplicity of the system now means that ward based scenarios and in-field scenario's may also benefit from immediate debriefing, whilst the scenario is still fresh in the students mind. The recording may also be saved and reviewed at a later time.



### SimMan software

The new SimMan software and user interface allow for easy adjustment and management of all patient parameters during both simple and comprehensive training scenarios.

An improved scenario editor program allows the educator to build advanced scenarios, allowing multiple alternatives and predefined changes to the vital signs. By using Handlers and Trends the educator can introduce multiple physiological and pharmacological changes into the simulation



### PDA

The PDA is easy to operate and gives the instructor wireless control of the SimMan systems functionality.



### Simulated Patient Monitor

SimMan has a new simulated patient monitor. This touch screen monitor provides concise clinical feedback of physiological parameters and emulates the Philips IntelliVue patient monitors. To provide a realistic learning environment the patient monitor may be customized to meet specific training objectives, and also to closely emulate other clinical patient monitor brands.



The 17" color LCD touch screen provides multiple simulated parameters each presenting multi level alarms. Snap shots of 12 lead ECG's and patient X-rays are also available to enhance the learning experience. Up to five configurations of the monitor may be created and saved, and the appropriate clinical parameters and monitoring curves can be edited to most conveniently meet your needs and learning objectives.

### 211-00050 SimMan Manikin

Includes: Manikin, BP cuff, SpO<sub>2</sub> probe, Air/CO<sub>2</sub> tube, Operating software, Directions for Use.



### 210-090xx Peripherals Kit Complete

Includes: Simulated patient monitor, USB web-camera, USB hub, PDA as remote control, Link Box and laptop.

### 210-091xx Peripherals Kit Standard

Includes: Simulated patient monitor, USB web-camera, USB hub, PDA as remote control and Link Box.

\*xx = language version

### Optional accessory:

210-01050	Compressor 230-240 V
210-01150	Compressor 110 V
381220	Regulator Unit
381850	Portability Kit
381655	Transportation Case SimMan
381602	Transportation Case Compressor
245-18050	Transportation Case Simulator Peripherals

#### Airway Features

- Multiple airway skills:
  - Bag/valve mask ventilation
  - Oropharyngeal and nasopharyngeal airway placement
  - Combitube placement
  - LMA placement
  - Endotracheal tube intubation
  - Retrograde intubation
  - Fiberoptic intubation
  - Light Wand intubation
  - Transtracheal jet ventilation
  - Needle cricothyrotomy
  - Surgical cricothyrotomy
  - Fiberoptic bronchoscopy
- Exhaled CO<sub>2</sub> Flow
- Spontaneous respiration and variable respiratory rate
- Trismus, tongue edema, pharyngeal obstruction and laryngospasm
- Decreased cervical range of motion
- Decreased lung resistance
- Pneumothorax decompression at 3 sites and chest tube insertion
- Stomach decompression

#### Circulatory Skills and IV Drug Administration

- IV training arm with replaceable skin and veins
- Sites for subcutaneous and intramuscular injections

#### Pulses

- Carotid, femoral, brachial, radial, dorsalis pedis and posterior tibialis pulses
- Pulses synchronized with ECG or compressions
- Pulse strength dependent on BP selected and pulse sites

#### Cardiac Functions

- Extensive ECG library with rate from 20-200
- Compression artifacts on ECG during CPR

- Defibrillation/Cardiac monitoring - 3 lead (4 connectors) ECG monitoring or via the defib paddles
- External Pacing – with variable pacing threshold

#### CPR

- ABC check
- Ventilation
- Chest compression
- ECG and heart rate can be displayed on the simulated monitor

#### Blood Pressure

- Can be taken automatically, auscultated or palpated
- Blood pressure arm with Korotkoff sounds synchronized with pulse for auscultation and palpation
- Easily varied BP: Systolic and diastolic can be set independently

#### Genitalia for Urinary Catheterization

- Male or female genitalia can be added to the simulator for urinary catheterization procedures

#### Sounds

- Simulator "speaking" through instructor microphone
- Heart sounds synchronized with ECG
- Independent left and right lung sounds
- Bowel sounds
- Vocal sounds, pre- or user-programmed
- Independent volume adjustment

#### Software operation

- Easy to operate
- Manual control over all parameters
- Scenario operation including Trend and Handlers preprogrammed by user

#### Video debriefing

- Web-camera recording
- Review event log together with synchronized recording of patient monitor and in-room video
- Stand alone debrief viewer for off site review

#### Simulated patient monitor

- Highly configurable
- Simulate several parameters including ECG (2 traces), SpO<sub>2</sub>, CO<sub>2</sub>, ABP, CVP, PAP, PCWP, NIBP, TOF, Cardiac output and other
- Viewable X-rays and snap shoot of 12 lead ECG
- Touch screen operation
- Multi level alarm

#### Remote control

- PDA as remote communicates through software via Bluetooth
- Easy-to-use software similar to PC user interface

#### Recommended Laptop Specification

Type:	Dell Latitude
Processor:	Pentium M, 1.8GHz
HDD:	60 GB
RAM:	512 MB min.
System:	Win XP Pro
Screen:	Dual screen with 1280 x 1024
Mouse:	2 button scroll wheel mouse
Other:	CD-RW RS-232 (serial port) Microphone input Headphone output 2-4 USB ports Internal Bluetooth Built-in Ethernet LAN

#### Optional Module Set Available

- SimMan Trauma Module Set
- SimMan Nursing Wound Module Set
- SimMan Bleeding Control Module Set

For more product information, please visit [www.laerdal.com](http://www.laerdal.com)



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