



**Laerdal**<sup>®</sup>  
helping save lives

*Emergency Care & Trauma*

# Improving patient safety



## **SimMan**<sup>®</sup> Essential

A realistic, full-body adult, wireless patient simulator, SimMan<sup>®</sup> Essential offers comprehensive clinical functionality to teach the core skills of airway, breathing, cardiac, and circulation management.

Manage SimMan Essential and all other Laerdal PC-operated simulators with the LLEAP unified software platform. This means you will find scenarios, conduct simulation training, and develop new scenarios to help meet your learning objectives with greater ease.

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

# SimMan® Essential

## Multiple Airway Skills/Features

- Controllable open/closed airway; automatically or manually controlled
- Head tilt/Chin lift
- Jaw thrust with articulated jaw
- Suctioning (Oral and Nasopharyngeal)
- Bag-mask ventilation
- Orotracheal/Nasotracheal intubation
- Combitube, LMA, and other airway placement
- Endotracheal tube intubation
- Retrograde intubation
- Fiberoptic intubation
- Transtracheal jet ventilation
- Needle/Surgical cricothyrotomy
- Variable airway resistance on/off
- Right mainstem intubation
- Stomach distention

## Airway Complications

- Can't intubate/Can ventilate
- Can't intubate/Can't ventilate
- Detection of proper head position
- Tongue edema
- Pharyngeal swelling
- Laryngospasm
- Trismus

## Breathing Features

- Simulated spontaneous breathing
- Bilateral and unilateral chest rise and fall
- CO2 exhalation
- Normal and abnormal breath sounds
  - 5 anterior auscultation sites
  - 6 posterior auscultation sites

## Breathing Complications

- Needle thoracentesis – bilateral
- Unilateral and bilateral chest movement
- Unilateral, bilateral and 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, radial, dorsalis pedis, posterior tibialis pulses and brachialis(only left side) synchronized with ECG
- Pulse strength variable with BP
- Pulse palpation is detected and logged

## Vascular Access

- IV arm (right arm) establish IV
- Intraosseous access (tibia and sternum)

## CPR

- Compliant with 2015 Guidelines
- CPR compressions generate palpable pulses, blood pressure wave form, and ECG artifacts
- Realistic compression depth and resistance
- Detection of depth, release and frequency of compressions
- Hand position sensor

## Eyes

- Blinking eyes, eyes open, closed and partially open
- Eye inserts, manually change pupils

## Other Features

- Foley catheterization
- Bowel Sounds – four quadrants
- Patient Voice
  - Pre-recorded and custom sounds
  - Instructor can simulate patient's voice wirelessly
- Instructor Communication
  - Multiple instructors communicate using integrated VOI protocol
- Fully articulating pelvis
- Leg rotation in all natural directions

## Pharmacology

- Manual drug recognition
- Extensive formulary

## System Features

- Wireless instructor computer with LLEAP software
- Control multiple manikins from 1 interface
- Control simulation from anywhere on your network
- Use Manual Mode to run "on-the-fly" for total control over all parameters
- Utilize Automatic Mode with pre-programmed scenario for a simple and standardized way to run a simulation
  - Patient cases utilizing physiological and pharmacological models
  - Pre-programmed scenarios
  - Self-authored content

- Simulation controls; fast forward, pause, rewind, save/restore
- Profile editor
- Future prediction and patient outcome display
- Integrated video debriefing
- Time stamped activities, vital signs, and instructor comments are captured in the event log

## Optional Patient Monitor

- Touch-screen simulated patient monitor provides concise clinical feedback for physiological parameters
- The monitor's color screen is configurable and provides multiple simulated parameters, each presenting multi-level alarms
- Simulated parameters include ECG (2 traces), SpO2, CO2, ABR, CVP, PAP, PCWP, NIBP/TOF, Cardiac output, Temperature (core and peripheral), additional and programmable parameters e.g. ICP
- X-Ray Display
- 12 Lead ECG
- Custom Image Display
- Custom Video Display
- Oxygen saturation and waveform

## Optional Bleeding System

- Internal Bleeding system to simulate traumatic injuries
- Simulation of bleeding at multiple sites
- Arterial and venous
- Vital signs automatically respond to blood loss & therapy
- Works with various wound modules & moulage kits

## ORDERING INFORMATION

213-02150 SimMan Essential Medium  
213-02250 SimMan Essential Dark  
213-02350 SimMan Essential Light

Includes: SimMan Essential Manikin with Fully Articulating Pelvis, LLEAP Software and License, Simulated Patient Cables, USB Headset/ Microphone, Storage Bag, 1 Year Manufacturer's Warranty

400-10201 Laptop Instructor/Patient Monitor  
400-09201 Tablet-PC Instructor/Patient Monitor  
400-09501 Rugged Tablet Instructor/Patient Monitor  
400-29301 All In One Panel PC Instructor/Patient Monitor

## OPTIONAL ACCESSORIES

400-96050 Webcam  
212-07150 Rugged Carry Case  
210-01750 Compressor  
216-00441 SimView System

## Operation

Customize your SimMan® Essential operation with 4 LLEAP instructor computer and simulated patient monitor options.



## SimCenter

Visit [www.laerdal.com/simcenter](http://www.laerdal.com/simcenter) to learn how to optimize your simulation training using SimCenter™ and SimMan Essential



## SimStore™

Access to validated, standardized content from industry experts

## SimManager™

A suite of online tools that allows you to fully optimize your entire simulation center operation

## SimView™

An integrated debriefing solution giving you the ability to study simulation events more closely

## Services

Laerdal offers comprehensive Educational Services to support your curriculum, and Technical Services to meet your product servicing needs. Whether you are setting up a one-room simulation site or a multi-bed simulation center, Laerdal can help.



# Survival Technology

Your Link in the Chain of Survival

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