

## Vital signs simulation



## VitalSim

### *Vital signs for manikins and skill trainers*

The VitalSim Vital Signs Simulator is the heart of Laerdal's VitalSim product line. When connected to VitalSim enabled manikins and skills trainers, VitalSim simulates ECGs, heart sounds, fetal heart tones, breath sounds, bowel sounds, blood pressure and pulses. VitalSim allows instructors to run preprogrammed scenarios, as well as write their own custom scenarios to meet their specific learning objectives. Data logging and download functions provide valuable information for use in performance assessment and debriefing.

- VitalSim **simulates a comprehensive array of core vital signs** for effective scenario-based training and skills training
- VitalSim is **logistically flexible and cost effective**, working with a wide range of manikins for training in hospital and prehospital care providers
- Preprogrammed and programmable scenarios provide **standardized training** and ease of use
- Cardiac capabilities include **1400+ ECG rhythms** variations, pacing and defibrillation
- Auscultation of normal and abnormal **heart, breath and bowel sounds**



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# VitalSim Product Features

## ECG

- Synchronized variable rate, rhythm, abnormalities and duration
- Programmable waiting rhythms
- Programmable scenario base algorithms for instructor control 3/4 lead ECG, pacing, and defibrillation capabilities (25–360)\*

*\*Compatible with manual, semi-automatic and automatic external defibrillators*

## Blood Pressure

- Auscultated and palpated blood pressure simulator
- Korotkoff sounds synchronized with ECG
- Systolic and diastolic pressure may be individually set in steps of 2 mmHG
- Auscultatory Gap, on/off feature
- Korotkoff sound volume control in 10 steps, 0–9

## Palpated Pulse Simulator

- Controls brachial, radial and carotid electronic pulses
- Pulses synchronized with ECG
- Pulse strengths dependent on BP
- Brachial pulse off when BP cuff pressure is above 20 mmHG
- Radial pulse off when BP cuff pressure is above Systolic BP level
- Bilateral carotid pulse on adult ALS manikins only

## Logging / Scenario Functions

- The PC editor allows for creating and editing scenarios
- Up to 10 scenarios and 25 logs held in the VitalSim Control Unit
- Logs may be downloaded to PC for after-action review

## Sounds

### Heart sounds synchronized with programmable ECG

- Aortic Stenosis
- Atrial Septal Defect
- Pulmonary Stenosis
- Friction Rub
- Austin Flint Murmur
- Diastolic Murmur Mi Stenosis
- Systolic Murmur
- Stills Murmur
- Mitral Valve Prolapse
- Normal Heart Sounds – Apex
- Opening Snap Msec
- Normal Heart Sounds
- Ventricular Septal Defect

### Lung sounds synchronized with breathing rate, 0–60 BPM. Individual lung or bilateral sound selection

- Coarse Crackles
- Fine Crackles
- Normal Breath Sounds
- Pneumonia
- Stridor
- Wheeze
- Pleural Rub
- Rhonchi

### Normal and abnormal bowel sounds

- Borborygmus
- Hyperactive Bowel
- Hypoactive Bowel
- Normal Bowel
- Fetal Tones

### Prerecorded or live feed voice sounds

- Cough
- Vomit
- Moan
- Scream
- SOB Breathing
- Yes
- No
- Cry (infant)

## 200-100XX VitalSim Control Unit\*

*\*Denotes Language version*

### VitalSim Includes:

Control Unit including battery case and batteries (6), Remote Control including batteries (4), Manikin to Unit Cable, Operating Device to Control Unit Cable, USB Cable for connection to PC, AC Adapter, Software CD, Carry Case and Directions for Use.



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