

SAM, Student Auscultation Manikin

Product: SAM, Student Auscultation Manikin®

Cat. No.: 718-9007

Price: (Call for latest pricing) 281-488-5901 or 1-800-364-5901 in US and Canada;

Email: keith.johnson@cardionics.com

Technical support: Unlimited

Warranty: One year – parts and labor

Where Used:

Skills Labs - Nursing Schools

Skills Labs - Medical Schools

Community College Nursing Programs

PA Programs

EMS Training Program

Respiratory Therapy Depts.

Pharmacy Schools

Physical Therapy Depts.

Athletic Training Depts.

Standardized Patient Training

How Used:

Group lectures

Individual student study with own stethoscope

View phonocardiograms

In conjunction with SAM On-Line

Optional Accessories (see description below)

SAM On-Line

The Arterial Pulse Training System

SimulScope® Infrared Auscultation System

Major Features

Individual student features

- Used with your own Stethoscope
- Carotid Pulse for Detection of Systole.
- Provides visual display of phonocardiogram with heart sound.
- Provides two channel display with heart and breath sounds.
- Select sounds via computer menu
- Any two sounds can be compared quickly and easily
- Palpate a thrill for grade 4+ murmurs
- Sounds with Variable Heart Rate Included.
- Comparison of sounds is quick and easy, i.e., compare Split S2, S3, S4 and ASD or innocent murmur with AS and MR.
- Lesson or program guide can be activated on the computer monitor with every sound.
- Full lesson guide for every sound with questions and answers
- SAM On-Line permits real study of auscultation with sounds at correct Anatomical site.

Instructor features

- Instructor can alter sound volume at any site and save his/her volume Settings and/or return to factory settings.
- Instructors can preprogram lectures making their presentation much smoother
- Classroom Instruction using SimulScope or Speakers
- Phonocardiograms provided on each sound for projection to class
- Phonocardiograms on two-channels for comparison purposes
- Case studies can be presented
- Listen to severe aortic stenosis in the neck as well as over precordial areas.
- Produce a pneumothorax in the chest
- Diminish the lower lung sounds while maintain normal volume at upper Chest
- Sounds for testing supplied

Overall

- Heart and lung sounds can be heard simultaneously or separately.
- Sounds at Correct Anatomical Site.
- 27 Heart Sounds, 21 Breath Sounds, 20 Bowel Sounds, 4 Carotid Bruits.
- Heart Sounds at four Anatomical Locations.
- Breath Sounds at eight Anatomical Locations.
- Breath Sounds can be played on one side only for illustration of Pneumothorax.
- Bowel Sounds at two Anatomical Locations.
- E-Scope
- E-Scope® Wireless Electronic Stethoscope and Wireless Headphones included to allow simultaneous listening by instructor and student.
- Angle of Louis Identified as landmark
- Anatomical T-Shirt supplied with rib locations
- Portable – 22 pounds. Carry Case with Wheels & Handle Optional
- 200 Page Lesson Guide Supplied
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Optional items

- Arterial Pulse Training System
- SimulScope Bedside Auscultation System (for transmission of sounds to classroom audience.)
- Classroom Infrared Emitter
- Auditorium Infrared Sound System
- SAM Speaker System
- SAM Carrying/Storage case with wheels & pull-out handle

Description:

Learning cardiac or pulmonary auscultation has never been easier than with the advent of the SAM, the Student Auscultation Manikin and SAM On-Line.

Can your students tell the difference between a pleural rub of the lung and a pericardial friction rub? With SAM, they can easily and quickly compare one sound with another. Innocent systolic murmurs often sound like the murmur of aortic stenosis. Can the student tell the difference? What is the best method to determine if the patient has mitral valve prolapse? With SAM, these and other sounds are presented along with a complete teaching guide.

SAM, the Student Auscultation Manikin provides a means for instructors to teach cardiac and pulmonary auscultation to students at any level. The students can be taught as a group using the optional SimulScope or Classroom Infrared Emitter. Later the students can practice on SAM using their own stethoscope and also with the optional SAM On-Line.

SAM On-Line. Users of SAM can obtain a site license to allow their students to access SAM On-Line, 24/7 from any computer connected to the Internet. SAM On-Line permits students to access all heart, bruit, breath, and bowel sounds. All sounds are heard at the correct anatomical site using the mouse to move the stethoscope. This program also has over 40 lessons on auscultation with illustrations, diagrams, phonocardiograms, questions and answers.

What's Included with SAM. SAM consists of a male manikin, laptop computer with installed software for running SAM, an E-Scope Wireless Electronic Stethoscope with Wireless Headphones for second listener, a Program or Lesson Guide and an Operator's Manual. The lesson guide is available in English, Spanish and German languages. There are 27 heart sounds, 21 breath sounds, 20 bowel sounds and 4 carotid bruit sounds directed to the correct anatomical location on the chest, back, abdomen and neck. Breath sounds are presented anteriorly and posteriorly. Sounds for testing are included. Lectures can be preprogrammed. Tests can be given from the instructor's lectures, if desired.

SAM allows as many as six sounds to be played on SAM simultaneously. For example, four heart and two lung sounds can be played at one time for extreme realism.

Students use their own stethoscope with SAM.

In a classroom for group instruction, the optional Classroom Infrared Emitter or SimulScope Bedside Auscultation System and HeartMan Infrared Headphones can be used to allow all students to hear the sounds simultaneously.

Phonocardiogram. Each sound produces a phonocardiogram on the screen as shown below.



Students learn faster and retain more if they can visualize the sound. This helps them direct their listening for the location of a click, snap, or murmur.

When two sounds are heard, such as a split second sound with respiration, the phonocardiogram will appear as a two channel display so students can distinguish between heart and lung sounds.

SAM provides heart and lung sounds (together or separately), lung sounds in eight anatomical locations, bowel sounds and carotid bruits in the neck.

Customized Volume Adjustments. Instructors can alter the sound volume at any location to illustrate a particular auscultatory event such as transmitting a murmur from one location to another. These changes can be saved for later recall. At any time, they can return to the factory settings and still maintain their individual changes.

Instructors can preprogram their lectures. Each sound is preselected and saved in a sequence. When playing the lecture, a keystroke moves SAM from one sound to another.

Lesson or Program Guide Included. A 200 page program or lesson guide describes each sound in detail with graphics showing where best to listen, what will be heard at each anatomical location (phonocardiograms), maneuvers to help identify the sound, questions and answers. An Operator's Manual and is also included.

Portability. SAM weighs 22 pounds and is easily moved from location to location. With SAM, you are not confined

Heart Sounds. Heart sounds are heard at the aortic, pulmonic, tricuspid and mitral areas of the chest. Sounds can be increased or decreased at any of these locations without affecting the volume at other locations. There is a wide variety of heart sounds available on SAM (see complete list. Click on [SAM Sounds](#)).

Carotid Pulse. A carotid pulse in the neck is timed with the first heart sound to indicate the onset of systole. Palpating the carotid pulse gives students a positive indication of the onset of systole.

Carotid Bruits. SAM presents four carotid bruits in the neck.

Breath Sounds. Breath sounds are heard in eight locations – 4 anterior and 4 posterior. With SAM, heart and breath sounds can be heard simultaneously, if desired, or separately.

With SAM, a pneumothorax is easy to illustrate. Just turn down (or off) the lung on one side of the chest.

Diminished breath sounds at the lower lung can be illustrated while maintaining normal volume at the upper lung.

In some instances, breath sounds are superimposed on the heart sounds. For example, when listening to splitting of the second heart sound, breath sounds are superimposed so student will learn the split S2 in inspiration and closing with no split during expiration. Where appropriate, other sounds such as atrial septal defect also have breath sounds superimposed on the heart sounds.

Bowel Sounds. SAM presents 20 bowel sounds in two locations (the upper right and left quadrants).

Preprogram your lectures with SAM. When presenting a lecture, instructors can preprogram and save their lectures permitting a smooth transition from one sound to another. As many as eight instructors can have up to eight separate lectures. Programming the lecture takes only a few minutes and is very easy.

Second listener. A Wireless E-Scope Electronic Stethoscope is included with SAM. The instructor wears Wireless E-Scope Headphones so that he/she can hear what the student is hearing. This is very helpful if a student is having difficulty understanding a particular sound.

SimulScope for Broadcasting Sounds in Classroom or Auditorium. Using the SimulScope Bedside Auscultation System, instructors can broadcast the sounds from SAM from the stethoscope to all students wearing a HeartMan Infrared Headphone. The SimulScope can cover a room of about 25. If larger groups are desired, the Auditorium Infrared Sound System can be used. It can handle auditoriums with up to 300 students.



Listening to SAM with the SimulScope



**Infrared Array
Auditorium Infrared Sound System**

Description of Optional Items:

SAM On-Line, cat. no 717-9000.

An On-Line version of SAM that permits students of SAM customers to practice auscultation 24/7 from any computer connected to the Internet. Provides heart, breath, bruit, and bowel sounds with a step-by-step lesson guide. For SAM customers.

SimulScope Bedside Auscultation System, cat. no. 718-7003.

Allows sounds to be broadcast throughout the classroom allowing all students and the instructor to hear simultaneously. Supplied with 6 HeartMan Infrared Headphones. More headphones can be added up to about 25. Cat. No. 718-7003.

Classroom Infrared Emitter, Cat. no. 718-0015. The E-Scope Wireless Electronic Stethoscope picks up the sound and transmits it by RF to the Classroom Infrared Emitter which rebroadcasts the sound to each listener wearing a HeartMan Infrared Headphone. Sounds are pure and clean.

E-Scope Wireless Electronic Stethoscope, cat. no. 360-8900, transmits to other Wireless E-Scopes or to the Classroom Infrared Emitter or Auditorium Infrared Sound System for rebroadcast to listeners wearing a HeartMan Infrared Headphone.

Arterial Pulse Training System, cat. no. 718-8550.

Provides two tactile pulse palpators for bimanual palpation of arterial pulses. Pulse waveforms are viewed on the screen while students palpate the pulse simultaneously. A complete text workbook is also provided.

SAM Speaker System, cat. no. 718-9011. Connect SAM to the SAM Speaker System using the Wireless E-Scope Electronic Stethoscope.

SAM Carrying Case with Wheels and Pull-out handle, cat. no. 236-8000.