M164

Sakamoto Auscultation Simulator

● Weight/About 14kg　● Case size/W65×D58×H28cm
● Accessories/USB cable, CD-ROM soft (Japanese, English), Stethoscope, Chest cover, Storage case

By reproducing various symptoms, supports practice of auscultation with a feeling of being in a clinical situation.

Chest cover　(Indicate auscultatory site)

＊The personal computer is not included.

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Feature

1. Learning through practice with a sense of reality
● Sternum and soft touch of the skin
● Seven built-in speakers (volume adjustable) provide true-to-life experience of hearing cardiac and breath sounds of actual patients by applying a stethoscope.

2. Realistic auscultatory sounds
● Reproduction of complicated cases is possible by combinations of 20 cases of cardiac sounds and 12 cases of breath sounds.
● Differences in auscultatory sounds can be confirmed realistically by the use of a personal computer (Windows).

3. Adjustable to details
● The heart rate and respiratory rate are adjustable.
● The volume of cardiac and breath sounds is adjustable in each region (cardiac and pulmonary regions) or all regions.

4. Presentation of case profiles
● Presentation of case profiles and points of attention with graphs facilitates understanding of characteristics of each disease.

Specifications

Size	Main unit　W55×D23×H50cm Box　　　　W16×D23×H　9cm
Heart sounds	20 cases×4 sites
Heart rate	adjustable
Respiratory sounds	12 cases×3 sites
Respiratory rate	adjustable
Volume	adjustable
Power source	AC100V 50/60Hz
Consumption of electricity	100W
Operting temperature range	5～40℃

Component Requirement

	Windows XP	Windows Vista	Windows7
O S	Home Edition Professional	Home Basic Home Premium Business Ultimate	Home Basic Home Premium Professional Ultimate
CPU	300MHz or faster x86processor	1GHz or faster x86processor	
Memory	256MB or greater	1GB or greater (Home Basic 512MB or greater)	
Hard disc	800MB available desk space	800MB available desk space	
Display	XGA(1024×768)	XGA(1024×768)	

＊Personal computer with CD-ROM drive and USB port is needed.
＊Upgrades to the PC operating system are not supported.

Practice
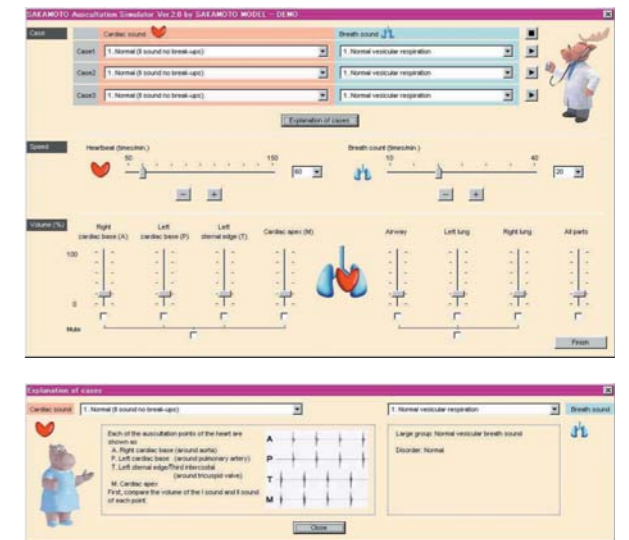
Breath sound

	Major Category	Minor Category	Disease
1	Normal alveolar breath sound		Normal
2	Intermittent rales (moist rales)	Fine crackles	Interstitial pneumonia, pulmonary fibrosis / pulmonary edema
3	Intermittent rales (moist rales)	Coarse crackles	Pulmonary edema, pneumonia, alveolar effusion
4	Continuous rales (dry rales)	Low pitched rhonchi (sonorous rhonchi)	Stenosis of middle-large bronchi, bronchial secretion
5	Continuous rales (dry rales)	High pitch rhonchi, wheeze	Bronchiolar stenosis, brochial asthma
6	Continuous rales (dry rales)	High pitch rhonchi, wheeze	Bronchiolar stenosis, brochial asthma
7	Tachypnea	Consonating rales	Nervous dyspnea
8	Intensified bronchovesicular sounds		Resting dyspnea
9	Continuous rales (dry rales)+ intermittent rales (moist rales)	High pitch rhonchi, wheeze+fine crackles	Cardiac asthma
10	Continuous rales (dry rales)	High pitch rhonchi, wheeze+prolonged exhalation	Bronchial asthma
11	Abnormal respiratory pattern	Tachypnea (shallow respiration) 60times／min	Central hyperpnea (midbrain disorder) hyperventilation syndrome
12	Abnormal respiratory pattern	Kussmaul respiration 36times／min	Diabetic ketoacidosis, uremia

Cardiac sounds

1　Normal (no splitting of the second sound)	11　Mitral stenosis
2　Normal (split second sound)	12　Mitral insufficiency
3　Abnormal split second sound	13　Aortic stenosis
4　Increased apical second sound in hypertension	14　Aortic insufficiency
5　Apical fourth sound	15　Subaortic stenosis
6　Innocent murmur	16　Atrial septal defect
7　Aortic ejection sound	17　Ventricular septal defect
8　Mid-systolic clicks	18　Pulmonary stenosis
9　Mitral escape clicks /murmur	19　Acute mitral insufficiency
10　Tricuspid insufficiency	20　Pulmonary insufficiency

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