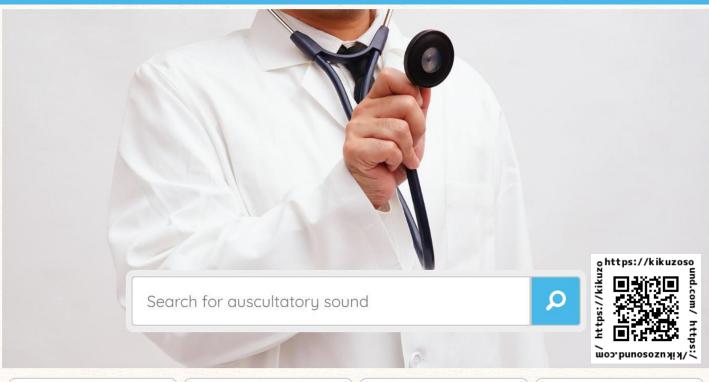
# Auscultation Portal Site Kikuzosound.com



















## Message from the Supervisor



The more you use a KIKUZO speaker, the more acquire auscultation skills.

Dr. Tsunekazu Takashina MD.PhD, FACC, FAHA

The cardiology patient simulator "K" was developed in 1993. In 1997, in this study its educational effectiveness were reported in CARDIOLOGY.

Even today, most of the university medical schools and medical colleges in Japan as well as many foreign countries have been using this simulator for their educational activities.

The advancement in diagnostic instruments using high technology has been remarkable in the last few decades. However, there is a tendency for many clinicians to become too dependent on these highly sophisticated instruments and to forget the importance of bedside clinical skills.

I believe that we have an excellent inborn sensor to recognize "organ language" and are able to detect minor changes of physical findings, such as heart sounds or murmurs of heart diseases.

The Kikuzo speaker is used as an exciting teaching tool, whenever and wherever the self-learning of auscultation is needed. Please start with normal heart sounds and advance to each case at your own pace. So, you will be able to recognize various abnormal sounds and murmurs.

The "Kikuzo" will be a great auscultation aide for you.

## Message from the Supervisor



Auscultation is an important skill for clinical practice.

Dr. Takeshi Saraya Kyorin University School of Medicine, Department of Respiratory Medicine

Auscultation is an important skill for clinical practice.

Physicians can use the stethoscope whenever they want, which is an indispensable for discovering the etiologies and/or information even after the timing of modern technologies were applied.

Furthermore, auscultation itself can give preferable emotional effects with the confidence for patients.

Physicians should image the lung sounds for individual respiratory disease just before auscultation.

Learning of auscultation skills for discriminating the respiratory diseases is pivotal issue in the view of imaging specific lung sounds in each anatomical location.

In this regard, the "KIKUZO and its website" will provide an important and useful lung sounds for physicians, which can clearly and reproducibly learn the representative and/or essential lung sounds in general practice.

1. Personal speaker for auscultation training with









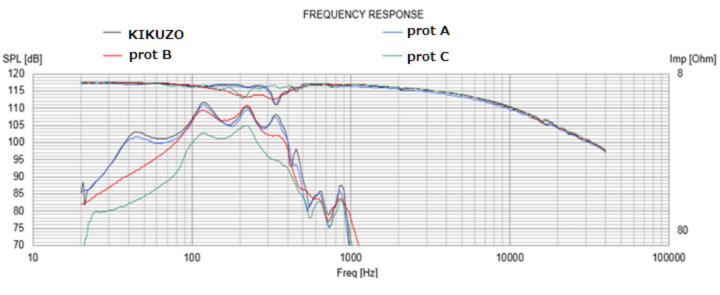


## 2. Real auscultation sounds



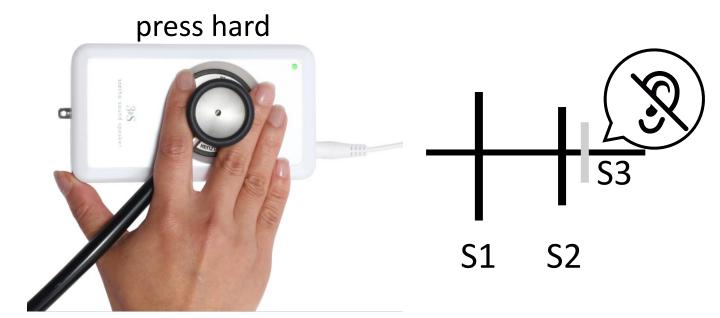
KIKUZO is a speaker for auscultation which is made to reproduce human sound correctly.

Organ sounds from the body are in the tens to 1K Hz. KIKUZO is designed to play only that frequency range.



Inhouse data

3. Sound 3 can be listened to with a light touched on a silicon-face. Sound 3 is no longer audible when the head is pressed hard.



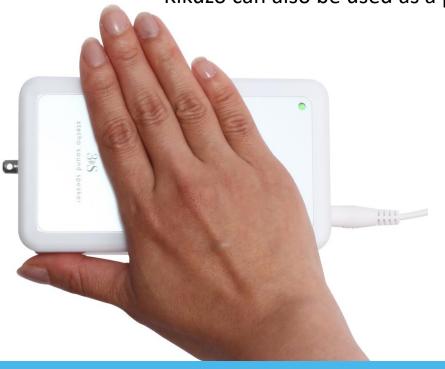


## 4. Handy size $76 \text{mm} \times 135 \text{mm} \times 35.5 \text{mm}$ , 0.21kg



## 5. Touch thrill on a KIKUZO surface

Kikuzo can also be used as a palpator.



6. Neck-strap holder attached for simulated patient





Bluetooth receiver can be connected (Please use a commercial product.)

With a distributor, more than one person can use it at the same time.

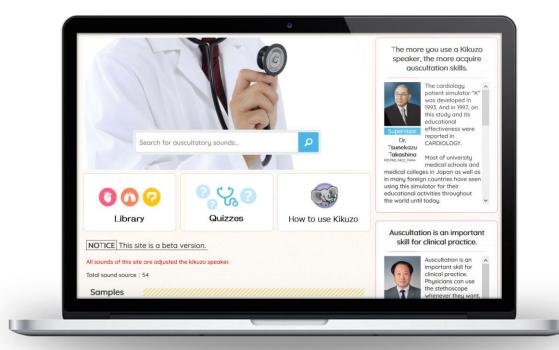




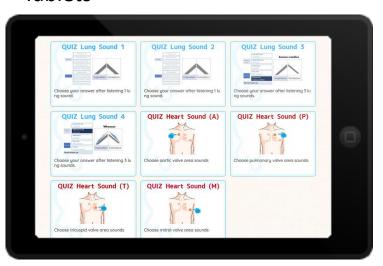
## Be available on variety terminals

#### Please connect to the Internet.

#### **PCs**



#### **Tablets**

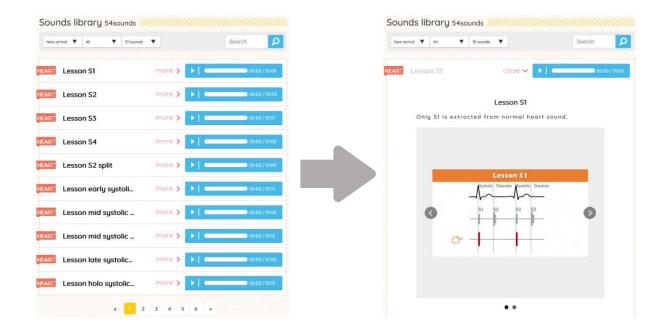


### **Smartphones**

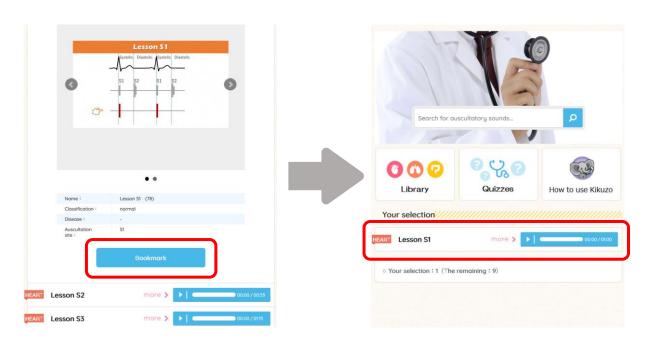


## Sounds explanation, Bookmark

## Push "more" to display the description of the sound.



### Push "Bookmark" to display on TOP page





## **Heart sounds**

Thirty major heart sounds and murmurs are listed.

The Lesson heart sound begins with a normal heart sound and then an abnormal sound is added, so it is easy to understand when the abnormal sound is heard.

S1 < S2/Normal

S1 > S2/Normal

S2 split with respirations

S2 fixed split

S3 gallop

S4 gallop

Summation gallop

Early systolic murmur/Innocent

Middle systolic murmur/ASD

Middle systolic murmur/ASD

Loto Systolic murmur/AM/D

Late Systolic murmur/MVP

Holosystolic murmur/MR Holosystolic murmur/TR

Early diastolic murmur/AR

Middle diastolic rumble/MS

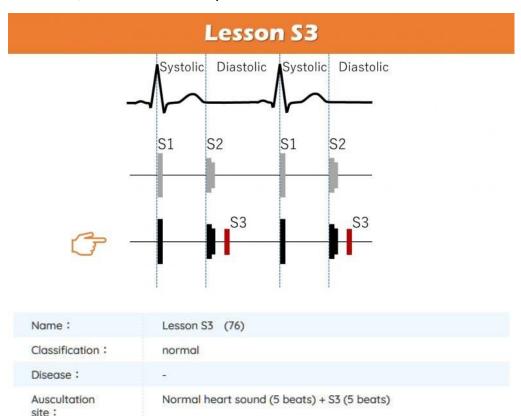
Continuous murmur/PDA

etc.

#### Lesson S3



After S2, a low sound component is heard in a small volume. This is S3.





## Lung sounds

Twenty-five sounds are listed. Normal lung sounds and abnormal breath sound are shown. Each has multiple rales.

### Types of lung sounds

Tracheal sounds Bronchial sounds Vesicular sounds Fine crackles 1 Fine crackles 2 Fine crackles 3 Coarse crackles 1 Coarse crackles 2 Coarse crackles 3 Wheezes monophonic 1 Wheezes monophonic 2 Wheezes monophonic 3 Wheezes polyphonic 1 Wheezes polyphonic 2

Rhonchi 1 Rhonchi 2

Pleural friction rub

Squawk + coarse crackles 1 Squawk + coarse crackles 2 Squawk + coarse crackles 3

etc.

#### Fine crackles1



Sounds made by the sudden opening of the small airways during inspiration/ listen for crunchy crackles early in the inspiratory phase/pay attention to listen in lower back lung fields.





## **Bowel & Other sounds**

Sixteen sounds are listed. Introducing guru, metallic, and Korotkoff sounds

### Types of Bowel & Other sounds

Bowel sounds Metallic sounds Korotkoff sounds 1
Bowel sounds Normal 1 Korotkoff sounds 2
Bowel sounds Normal 2 Korotkoff sounds 3
Bowel sounds Normal 3 Korotkoff sounds 4

Korotkoff sounds 2 Korotkoff sounds 7 Korotkoff sounds 3 Arteriovenos shunt 1 Korotkoff sounds 4 Arteriovenos shunt 2

etc.

#### Metallic sounds

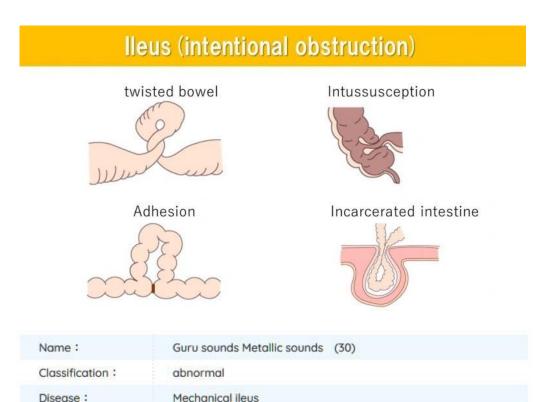
Auscultation

site:



Korotkoff sounds 5
Korotkoff sounds 6

Sounds produced when the intestinal lumen is obstructed by intussusception, volvulus, adhesions, intestinal hernias or tumors and the fluid moves through that area / the sound is high pitched and metallic.



abdomen

## Quizzes

There are quizzes in which you can listen to a single sound or two more sounds and choose the correct answer. Each quiz has 5 questions. The display order is random.

## The number of Quizzes







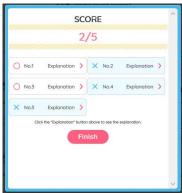














## Sound list 70 items



#### **Heart sound**

S1 < S2/Normal

S1 > S2/Normal

S2 split with respirations

S2 fixed split

S3 gallop

S4 gallop

Summation gallop

Early systolic murmur/Innocent

Middle systolic murmur/AS

Middle systolic murmur/ASD

Late Systolic murmur/MVP

Holosystolic murmur/MR

Holosystolic murmur/TR

Early diastolic murmur/AR

Middle diastolic rumble/MS

Continuous murmur/PDA

mono

S1 < S2

S1 > S2

Sound 3

Sound 4

S2 split

Early systolic murmur

Middle systolic murmur/AS

Middle systolic murmur/ASD

Late systolic murmur/MVP

Holo systolic murmur/MR

Holo systolic murmur/TR

Early diastolic murmur/AR

Middle diastolic rumble/MS

#### **Bowel & Other sounds**



Korotkoff sounds-1

Bowel sounds-2

Korotkoff sounds-2

Bowel sounds-3

Bowel sounds-4

Korotkoff sounds-3 Korotkoff sounds-4

### **Lung sounds**

Tracheal sounds

**Bronchial sounds** 

Vesicular sounds

Fine crackles 1

Fine crackles 2

Fine crackles 3

Coarse crackles 1

Coarse crackles 2

Coarse crackles 3

Wheezes monophonic 1

Wheezes monophonic 2

Wheezes monophonic 3

Wheezes polyphonic 1

Wheezes polyphonic 2

Rhonchi 1

Rhonchi 2

Squawk+CoarseCrackles1

Squawk+CoarseCrackles2

Squawk+CoarseCrackles3

Pleural friction rub

Tracheal+Heart(S1<S2)

Bronchial+Heart(S1<S2)

Bronchial+Heart(S1>S2)

Vesicular+Heart(S1<S2)

Vesicular+Heart(S1>S2)

Korotkoff sounds-5 Korotkoff sounds-6 Korotkoff sounds-7

Arteriovenous shunt-1 Arteriovenous shunt-2 Arteriovenous shunt-3

Arteriovenous shunt-4



## **About Us**

With advancement in the digitalization of medical devices, diagnosis and treatment technologies are developing remarkably fast. Most of the data is displayed on a PC screen, so in the consultation room it is easy to look only at the PC. No matter how high the diagnostic accuracy, patient satisfaction cannot be obtained through medical care that only looks at PCs.

We think that this is one of the causes of patients making many different clinical visits.

In response, we want to open up clues through auscultation. When performing auscultation, the distance between the doctor and the patient is short. We believe that the closer the physical distance is, the closer the distance of the mind is, and that trust is born. We believe that trust reduces the number of visits to clinics and thus reduces the burden on doctors and medical staff.

On the kikuzosound.com (auscultation portal site), many sounds such as heart sounds and lung sounds are released. All sound sources are processed in-house, but if you listen with an appropriate acoustic device, you can hear a realistic auscultation sound that is almost the same as the actual case. Auscultation is better the more you listen. Please listen to a lot of the sounds on this site and improve your auscultation technique.

The more you listen, the better your auscultation skills!

CEO Kiyoshi Fujiki Telemedica Inc 9-1, Tsutsujiagoka, Aobaku, Yokohama, Japan +8145-875-1924 fujiki@telemedica.co.jp

## **Looking for Sales Partners for Kikuzo**

Kikuzo is increasingly used in medical schools and nursing departments in Japan. Its high sound quality and portability have complemented the auscultation training of simulators, and it is highly regarded as a device that can be easily used by OSCE. Kikuzo is easy to use for both personal learning as well as online education.

- The Kikuzo has won the "Japan e-Learning Award, EdTech Special Award 2018".
- We outsource the production of Kikuzo to Pioneer Corporation (Japan), a world-famous sound manufacturer.

If you would like, please contact us.

CEO Kiyoshi Fujiki Telemedica Inc.