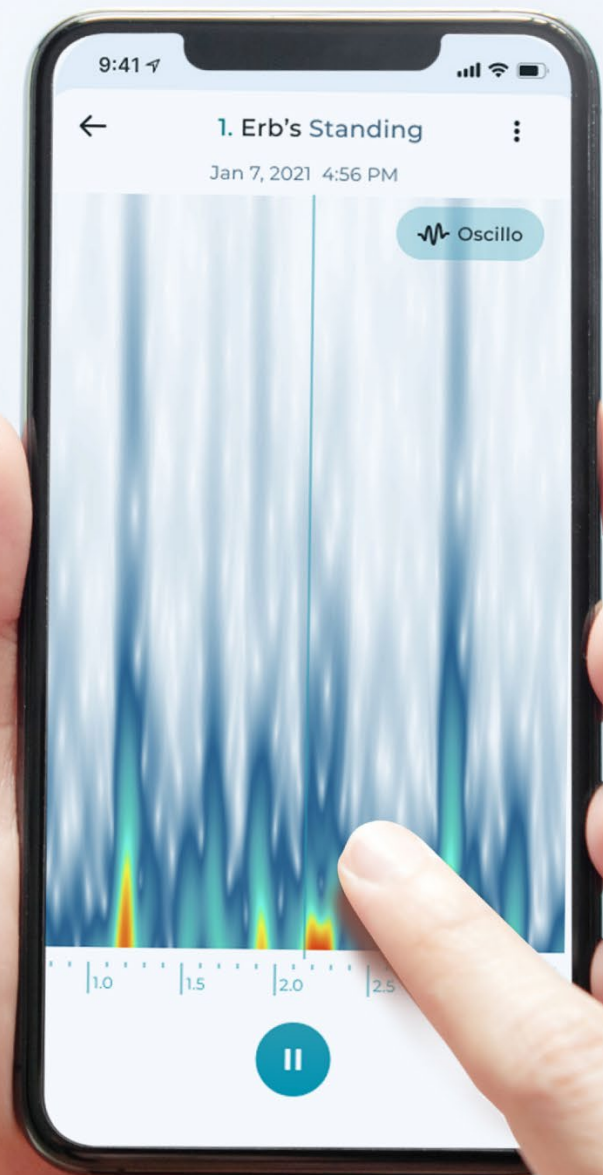


USER GUIDE FOR THE MEDICAL DEVICE

Stethophone

Version: 2.3.0[0]

Last Updated: February 14, 2024



Stethophone

Directions for use information

Directions for use

- Do not use Stethophone for any purpose other than specified in the Indications for Use.
- Stethophone can be used by both healthcare professionals and lay users.
- Stethophone cannot detect or diagnose any health conditions and can only be used for diagnostic decision support. Stethophone is not intended to be used as the sole means for diagnosis. Stethophone is not intended for self-diagnosis.
- Stethophone can only be used on specified smartphone models.
- Remove any cables and smartphone cases prior to listening in real time or recording sound.
- For effective sound capture, press the bottom of the smartphone to the skin so that there are no gaps.
- Wireless headphones are required to listen in real time or during recording. Any headphones can be used for listening to recorded sound.
- Record sound in a quiet place.
- Listening through clothes is not recommended. It may reduce Stethophone effectiveness.
- An Internet connection is required in order to record and send examinations.
- Familiarize yourself with User Guide before using Stethophone. There are no additional training requirements for the use of Stethophone.

Safety precautions

- Do not use over damaged skin areas.
- Clean the smartphone before each use in accordance with Apple Inc. cleaning guidelines [<https://support.apple.com/en-ca/HT207123>] or the USA government recommended cleaning rules for mobile phones [<https://www.fcc.gov/consumers/guides/how-sanitize-your-phone-and-other-devices>].
- It's recommended to switch off other applications, especially graphics-intensive or processor-intensive, while using Stethophone to avoid increased GPU usage. If for any reason you find your smartphone too warm at some point, temporarily pause the usage of Stethophone. Follow Apple Inc.

recommended instructions for temperature management [<https://support.apple.com/en-us/HT201678>].

- Follow Apple Inc. recommended product safety instructions, [<https://support.apple.com/en-ca/guide/iphone/iph301fc905/ios>] including:
 - Do not use on patients with pacemakers, implantable cardioverter-defibrillators, and cardiac resynchronization therapy devices.
 - Do not use near magnetic resonance imaging (MRI) devices.
 - Do not press to the body while charging the smartphone.
 - Do not use if the smartphone has visible physical damage.

Cybersecurity precautions

- Only authorized users can access Stethophone.
- Two-factor authentication will be triggered every 30 days.
- You need to authorize every new smartphone for Stethophone use.
- Installing antivirus on smartphones is recommended for your data protection.
- Ensure you have the right to send examination data to others.
- Do not share your Stethophone credentials with anyone.
- You will be logged out after 10 minutes of inactivity.
- When Stethophone is open, do not leave your smartphone unattended and unlocked.
- Log out of Stethophone when you are not using it.
- If the system becomes unavailable due to networking, cloud, or connection problems, you will be shown a message. No further action is required. When the connection is available, the application will continue working as intended. Stethoscope remains available for use regardless of the connection status.
- Stethophone is being monitored on a regular basis for potential threats that may result in cybersecurity incidents, such as unauthorized use of the system as a gateway to other systems, unauthorized use of another user's account, unauthorized use of the system, or execution of malicious code that destroys or steals data. If a cybersecurity incident affects the application or Personal Health Information loss is identified, you will be informed about the incident via email and, if necessary, given instructions on how to proceed.
- Manufacturer constantly maintains the appropriate security level of the application. When new versions are released, we recommend you update your application.

Privacy and terms

Carefully read Disclaimer, Privacy Policy and Terms & Conditions for using Stethophone. These documents will be presented for your acceptance when accessing Stethophone for the first time. Any time later, you can find the documents in **Settings >> Legal**.

Manufacturer

Sparrow Acoustics Inc., located at 2416 Natura Dr., Lucasville, Nova Scotia, Canada, B4B 0X3.

How to report serious incidents or other complaints, or get answers to any questions that arose while using Stethophone

To ensure further effective and safe use of Stethophone, please report any complaints on device performance and any incidents detected during the use of this medical device to the Stethophone team at support@stethophone.com

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1. Introduction

Thank you for choosing Stethophone! Stethophone has been developed with the assistance of experienced acousticians and cardiologists.

Stethophone is an application for your smartphone that allows you to listen to heart and lung sounds in real time, record these sounds using specific spots on the body for further analysis, and send these recordings to physicians. To be a Stethophone user, you don't need to have any medical background or any advanced knowledge of human anatomy and physiology. Going forward, such users will be referred to as "home users", meaning they are regular users without any medical training.

This user guide describes the Stethophone functionality and information you need to know to use Stethophone. Please read the guide carefully before using Stethophone and refer to it for future questions.

In addition to this user guide, you can watch a video training module [<https://youtu.be/ec-V8-TMM4Y>] with a brief summary of the Stethophone functionality.

2. Product name

Our product name is "Stethophone". Devices of this type are commonly called smartphone stethoscopes.

3. Product description

Stethophone is an electronic stethoscope software application that operates on smartphones. Stethophone is designed for use by both healthcare professionals and home users.

Stethophone enables the capture and amplification of chest sounds for real-time or recorded listening. Cloud storage with sound record sending capabilities, filtering for selected frequency ranges, and visualization all assist with sound analysis.

Stethophone is designed to assist healthcare professionals in both hearing and visualizing heart and lung sounds during a physical examination of a patient and in storing recorded sounds in the cloud for later analysis. It also enables home users to record and send chest sounds to their physicians.

Stethophone can be used for the assessment of chest sounds of adult patients in clinical and non-clinical environments. Assessment is performed by healthcare professionals, while sound capturing can be performed by both healthcare professionals and home users.

Key product features:

- Capturing chest sounds using the smartphone microphone:
 - Listening to chest sounds in real-time,
 - Recording of chest sounds,
- Sending examinations to specialists for assessment,
- Two modes of sound visualization: oscillogram and spectrogram,
- Selecting from three audio filters for listening:
 - Bell: Traditional filter used in stethoscopes for low frequency sounds,
 - Diaphragm: Traditional filter used for higher frequency sounds of heart and lungs, and
 - Starling: Filter for listening to the full frequency of chest sounds.

Collectively, these features enable home users to acquire their own sounds, so as enable healthcare professionals to examine patients on site and remotely, seek out second opinions from specialists, and use the device in a telemedicine context.

3.1. Intended use / Indications for use

Stethophone is an electronic stethoscope that enables detection, amplification, filtering, and transmission of auscultation sound data (heart and lungs), whereby a clinician at one location can listen to the auscultation sounds of a patient acquired on site or at a different location. Stethophone is intended for use on adult patients. Stethophone is intended to be used by professional or lay users in a clinical or nonclinical environment. Stethophone is not intended for self-diagnosis.

3.2. Recommended equipment

To use Stethophone, you need the following equipment:

Smartphone: Stethophone is an application for **Apple iPhone** use only. Stethophone is compatible with the following iPhone models: 6s, 6S Plus, SE 1st generation, 7, 7 Plus, 8, 8 Plus, X, XS, XS Max, XR, SE 2 generation, 11, 11 Pro,

11 Pro Max, 12, 12 Pro, 12 Mini, 12 Pro Max, 13 mini, 13, 13 Pro, 13 Pro Max, SE 3rd generation, 14, 14 Pro, 14 Pro Max, 15, 15 Plus, 15 Pro, 15 Pro Max.

Stethophone operates on iOS 15 or higher.

*iPhone and iOS are registered trademarks of Apple Inc.

Bluetooth headphones: To listen to the chest sounds in real time, we recommend using headphones that are connected to the smartphone via Bluetooth. The type of headphones can be “in-ear” or “over-ear”.

*Bluetooth is a registered trademark of Bluetooth SIG Inc.

When listening to recorded sounds, you can use either Bluetooth or wired headphones.

For the best Stethophone experience, set your smartphone volume to 50%. If necessary, you can additionally amplify the audio during live listening using the Stethophone app features.

3.3. Cleaning requirements

Clean your smartphone following the manufacturer's instructions outlined in Apple Inc. cleaning guidelines [<https://support.apple.com/en-ca/HT207123>] or with the USA government recommended cleaning rules for mobile phones [<https://www.fcc.gov/consumers/guides/how-sanitize-your-phone-and-other-devices>]. It is recommended to wipe the microphone with isopropanol swabs between each use.

3.4. Software updates

Sparrow Acoustics provides software updates. We recommend that you always keep your Stethophone application up to date as you would do with any other important application or update. When major releases take place, the application will prompt you to update before proceeding with the use of Stethophone.

4. Stethophone installation and registration

Stethophone is a standalone mobile application that does not require additional hardware or software to function. Stethophone is ready for use from the moment it is installed and authorized on your smartphone. No additional audio calibration is required.

Before using Stethophone, you need to download the application from a location defined by Sparrow Acoustics Inc. (i.e., App Store), and then follow the registration procedure (see [4.1 New Account Registration](#)).

You can add multiple users to your Stethophone application (e.g., your family members). Each user will have to go through the registration process.

Stethophone uses two-factor authentication to provide an extra layer of security. Re-authentication is triggered every 30 days.

Stethophone needs access to the iPhone microphone to record or listen to the chest sound. It's recommended to also enable geolocation to function most effectively. You will get in-app prompts to provide access to the microphone and geolocation.

After registration you must familiarize yourself with the short Welcome guide slider before you can start using the application.

For your reference, this guide contains a full list of icons and buttons that are used in the application (See Appendix 1 [Explanation of icons](#)).

At any moment, you can contact the Stethophone support team with any questions via the Help Center link available on the Login screen.

4.1. New account registration

To register a new Stethophone account, you need to provide your email address and create a password. No other personal information is required for registration.

Download Stethophone and follow these steps to register a new Stethophone account and authorize your smartphone:

1. Open the Stethophone application.
2. On the Login screen, tap Sign Up, enter your email address, and then tap Continue.

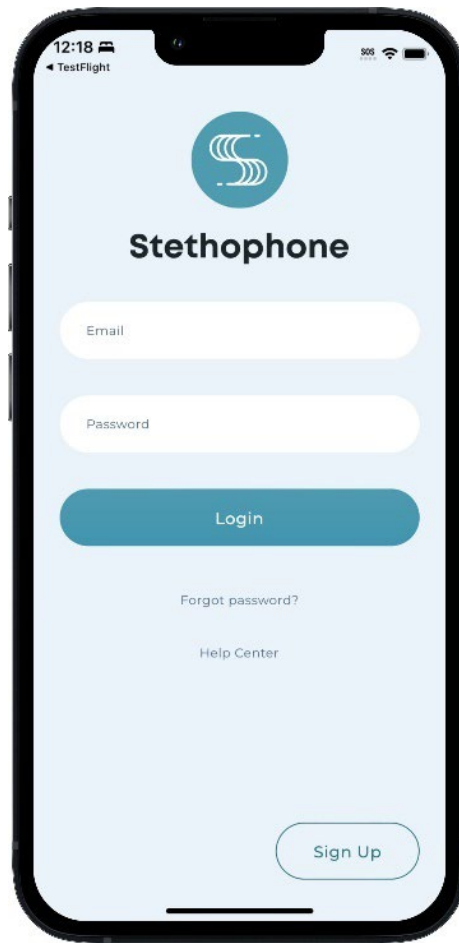


Figure 1. Stethophone Login screen

3. **Create a new password for your Stethophone account and tap Create.**
 - The password should be at least 10 characters long, and should contain at least 1 number, 1 special symbol, 1 lowercase letter, and 1 uppercase letter.
 - The password shouldn't match your email address.

At this point, your Stethophone account is registered and the email address and password you provided can be used to sign in to Stethophone. Proceed with a two-factor authentication to ensure the security of your Stethophone application.

4. **Check your email. A verification code is sent to your email.**
5. **Return to Stethophone and enter the verification code to authorize your smartphone.**
6. **Read and accept the legal documents.**

When you change or update passwords, the application will require the new password to be different from the current password.

4.2. Welcome Guide

Prior to using Stethophone, you should familiarize yourself with the Welcome Guide. New Stethophone users, will be automatically taken to the Welcome Guide.

At any time, you can find all available guides in **Settings >> User Guides**.

4.3. Doctor Mode

Stethophone offers a feature, Doctor Mode, which provides advanced functionality useful for healthcare professionals, such as the stethoscope, additional sound filters, and the ability to change the playback speed of a chest sound recording. You can enable or disable Doctor Mode at any time.

By default, Doctor mode is disabled to provide a cleaner and more intuitive interface for home users. You can enable/disable Doctor Mode by switching the toggle in **Settings >> Doctor Mode**.

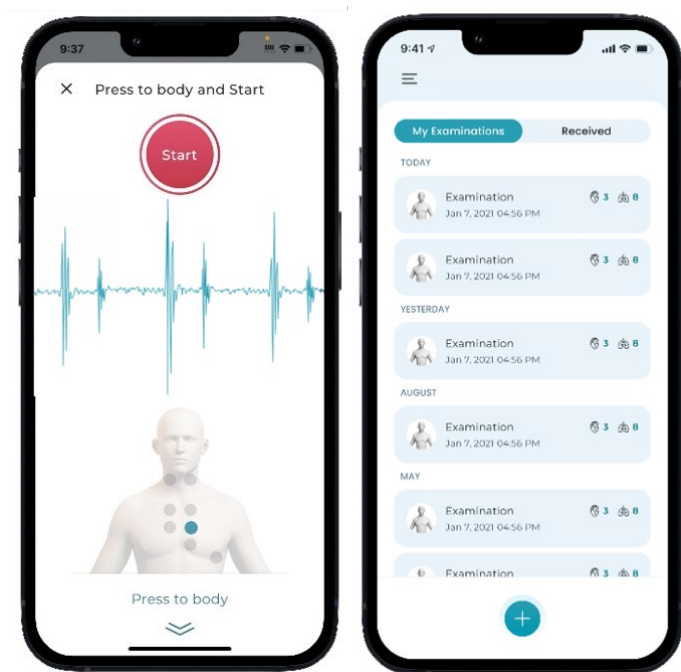


Figure 2. Doctor Mode disabled

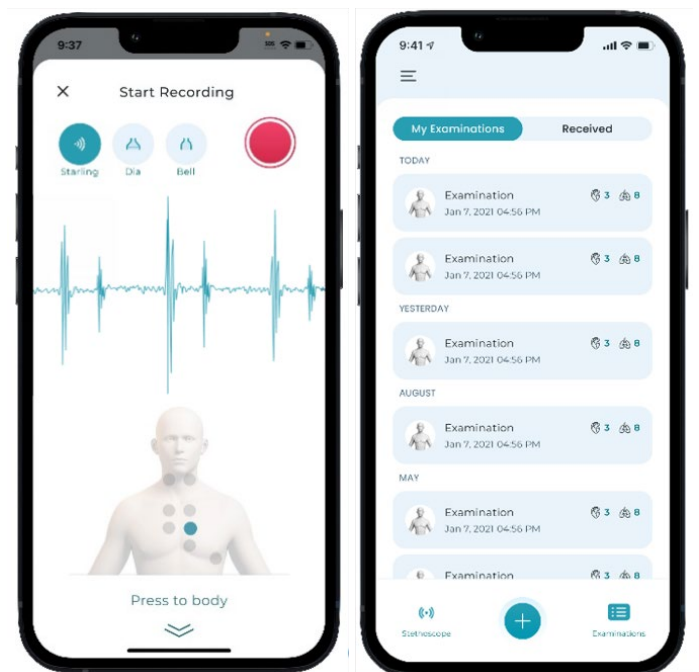


Figure 3. Doctor Mode enabled

5. Using the Stethoscope

If you are using Stethophone with Doctor Mode enabled, the Stethoscope feature is provided to listen to chest sounds in real-time, just as you would do with a conventional stethoscope.

Connect Bluetooth headphones to your smartphone. When prompted by the application, grant microphone access to enable live auscultation sounds

through your headphones. An oscillogram allows you to perform a visual analysis of the sounds you hear in real-time.

Stethophone uses the microphone at the bottom of your smartphone to acquire the sound. An animated indicator at the bottom of the screen shows where the smartphone should be placed against the body.

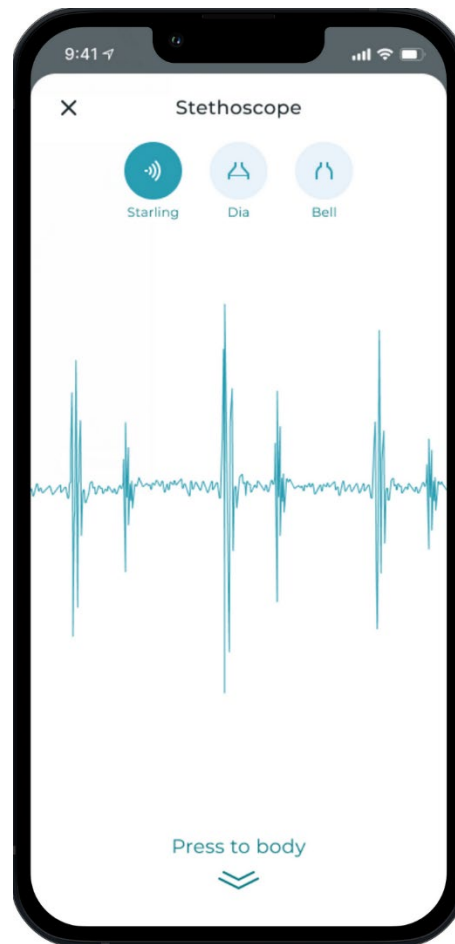


Figure 4. Stethoscope

NOTE: The Stethoscope feature does not require an internet connection. It remains available even when you don't have any network or internet connection. Once the application has been initially authorized, the Stethoscope feature will also be available without the need for logging in. However, if you intend to make a recording, you will be required to log in.

5.1. Smartphone placement

Follow these important techniques to ensure quality auscultation results:

- Remove any cables and the smartphone case before using Stethophone.
- Ensure Bluetooth headphones are connected and working, and the smartphone volume is set to about 50%.

- Hold the smartphone gently near the top to avoid hand muscle trembling and movement during the recording.
- Choose the desired auscultation site and press the bottom of the phone to your bare skin. Ensure the bottom of the phone fits snugly and evenly against the body surface without gaps.
- Each screen related to pressing the phone to the chest has an animated sign indicating the correct phone position. It remains visible during the entire session of listening/recording.
- Ensure the smartphone is perpendicular to the point of contact. Contact with your body should remain steady without movement to avoid frictional noise.
- Avoid placing the microphone directly over ribs, as sound quality can be poor when blocked by bone.
- Use light, even pressure to press the smartphone to your body. Excessive pressure may result in artifacts or unwanted sounds.
- While listening, adjust the smartphone's position as needed to ensure that you can hear the heart sound as clearly as possible.

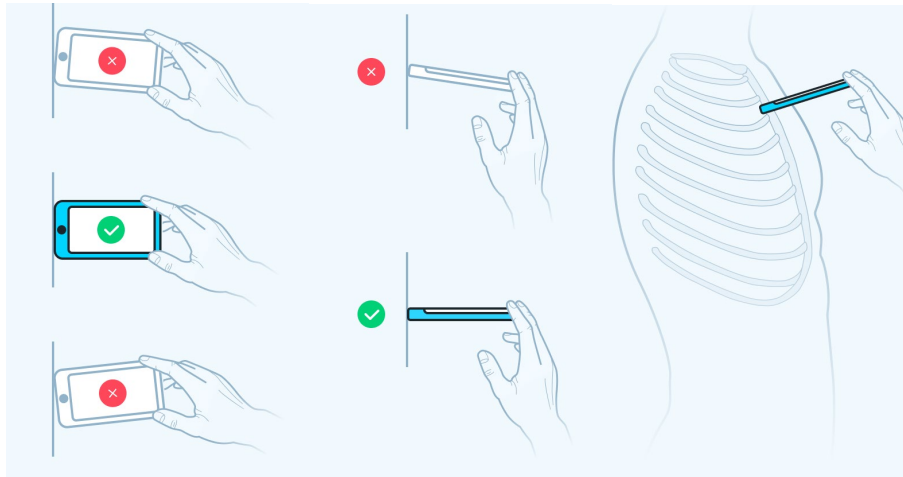


Figure 5. Smartphone placement

5.2. Sound filters

The sound filters provided with Stethophone enhance the audibility of chest sounds and allow users to select between several frequency ranges, each range best suited for listening to specific details. The following sound filters are available in Stethophone:

- **Starling (Default)** - a filter algorithm that makes subtle sounds of any frequency more audible (60 -1400 Hz.). This filter is intended to eliminate the need to switch between Diaphragm and Bell filters.
- **Diaphragm** - a filter algorithm that highlights heart and lung sounds, making them more audible in ranges between 170-850 Hz. This filter allows users to

listen to high-frequencies selectively with traces of low-frequencies. This filter is good for hearing S1 and S2 splitting, ejection sounds, most lung sounds, and most heart murmurs.

- **Bell** - a standard filter that transmits lower-frequency sounds while removing higher frequencies, its frequency spectrum ranges from 25 to 300 Hz. This filter is recommended for focusing on S3, S4, and diastolic rumbles.

The default setting is the Starling filter. To select a filter, tap the button for the desired filter at any point during use. The active filter will be highlighted.

While selecting the correct filter is important for healthcare professionals, home users can select whichever filter they prefer. Stethophone will store the original sound and physicians will still be able to use any filter they need to assess the sound later.

If you don't use sound filters, you can disable them by turning Doctor Mode off in Settings, and they will be hidden from the screen.

5.3. Volume control

Stethophone offers an in-app volume control that is helpful when heart and lung sounds are faint or when someone just needs a louder sound.

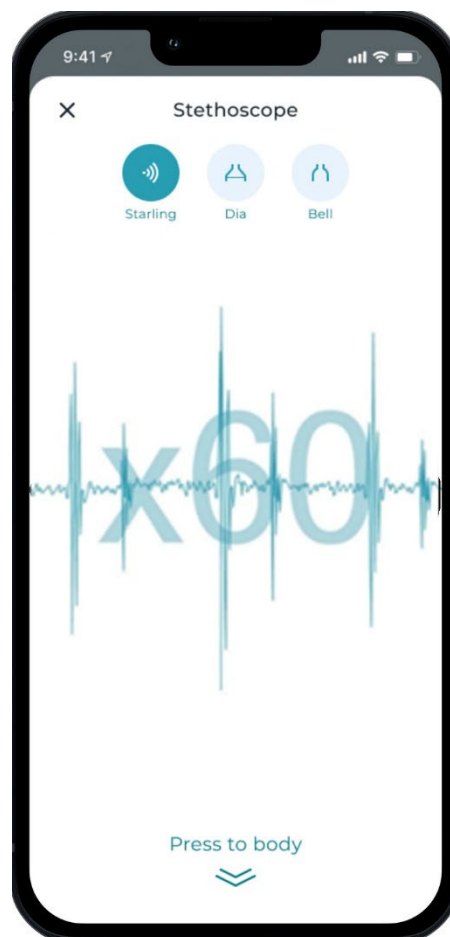


Figure 6. Adjusting sound amplification level

The Stethoscope sound level can be amplified up to 120X for all filters and can be adjusted in increment steps of 5X. The default amplification level is set at 60X for all filters.

Before you change the in-app volume, check that your iPhone volume is set to around 50%. This will allow you to better control the sound and adjust it perfectly to your hearing. Do not make the volume louder than is necessary to hear the sound comfortably.

To increase volume: Swipe up on the Stethoscope screen until the desired volume level is achieved.

To decrease volume: Swipe down on the Stethoscope screen until the desired volume level is achieved.

The volume level will reset each time you reopen the Stethoscope screen.

6. Examination

It is important to record chest sounds when you feel symptomatic, so you can later send or show these recordings to your doctor.

In Stethophone, we refer to a group of heart and lung recordings as an examination. Examinations typically contain one or more sound recordings performed during a single session.

You can record chest sounds from several sites on the body, called **body spots**. Each spot provides doctors with valuable information about how the heart and lungs function in specific areas. Some cardiac symptoms may only be heard at specific spots, so recording more spots provides your doctor with more information for an assessment. As for the lungs, diseases can sometimes affect only specific areas, so recording from various spots is recommended.


The healthcare professional may also recommend that you record your chest from a specific set of spots (e.g., only spots 2, 3, and 4). It may also be recommended that these recordings are made every few days or when you are feeling symptomatic. Each set of recordings would then be saved as a separate examination.

Within each examination you can save:

- Up to 23 sound recordings made on heart and lung body spots.
- Disease tags related to your diagnosis.
- Notes describing symptoms or other information relevant to the examination.

6.1. Making a recording

To create an examination and make recordings:

1. Open the My Examinations screen. When the Doctor mode feature is disabled, My Examinations will be your Home page. If you are using Stethophone with Doctor Mode enabled, your Home screen is set to Stethoscope, so navigate to My Examinations by swiping down or pressing the Close button.
2. Tap  to create a new examination.

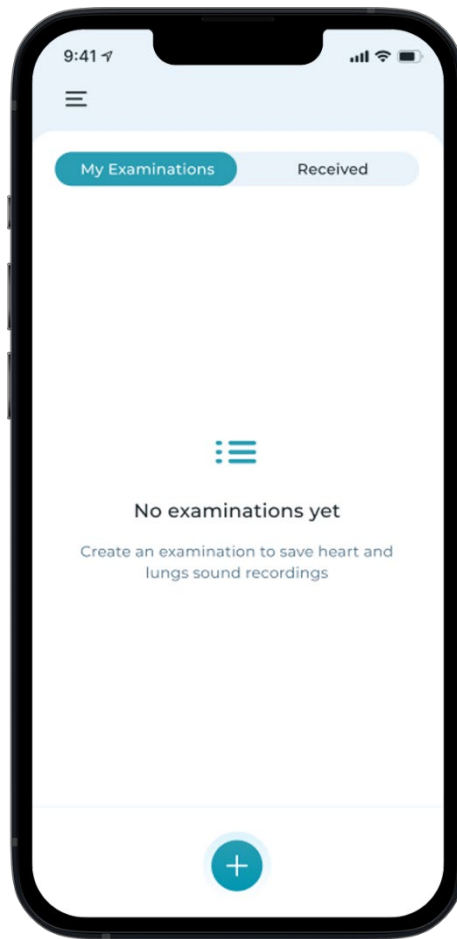






Figure 7. Creating new examination

3. Select a body spot from those displayed on the image of a human body. To switch between heart and lungs, tap on the corresponding buttons  Heart /  Lungs in the bottom-right corner.
Tap  Front /  Back buttons in the bottom-left corner to switch between front and back of your body.
Some spots are out of your reach (for example, spots on your back), so you will need help from someone else to record these spots.
4. Select a body position from the dropdown list. The list of body positions includes Standing, Sitting, Supine (lying on your back), Left Decubitus (lying on

your left side), and Squatting. Body positions often influence heart sounds, blood flow, and the clarity of the recording. You can hear the difference yourself by listening to the same body spot while taking different positions. For some symptoms, physicians may recommend a specific position. However, in general, you can select any position that makes you feel relaxed and comfortable and allows you to hear your heart and lungs clearly.

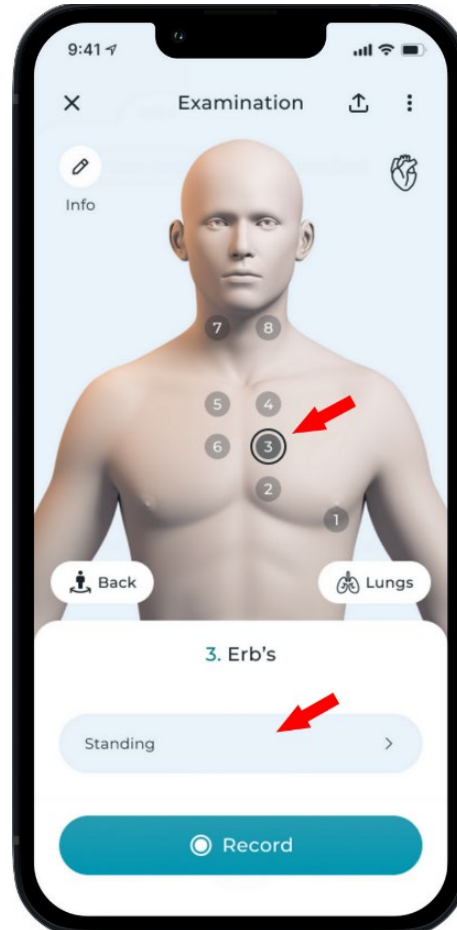


Figure 8. Selecting body spot and position

NOTE: You can record one or more spots for each examination. Once you complete one recording, you can return to the Examination screen and record other body spots by selecting a spot and your position and repeating the recording process. All additional recordings will be saved in the examination.

5. Tap Record at the bottom of the screen to open the Start Recording screen.
6. There is an animated indicator at the bottom of the Start Recording screen where the smartphone should be applied to your body. Ensure headphones are connected and place the bottom of the smartphone at one of the standard body spots as shown below:

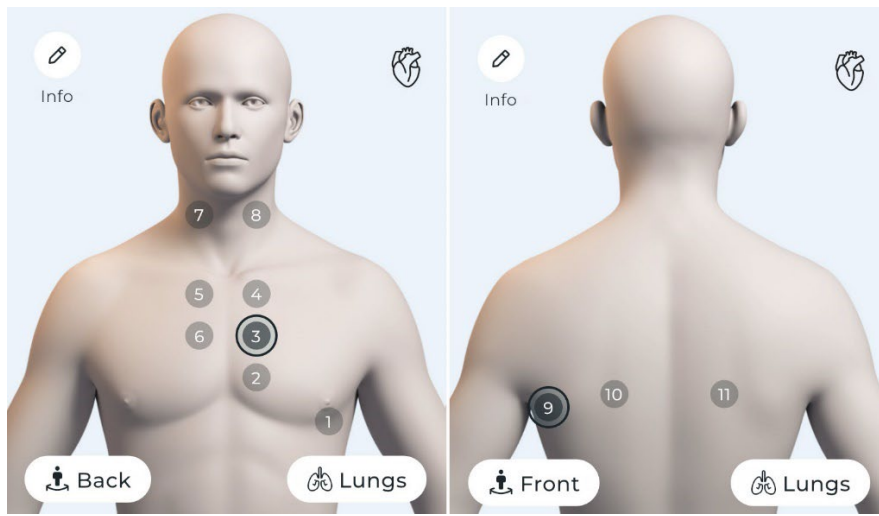


Figure 9. Heart auscultation spots

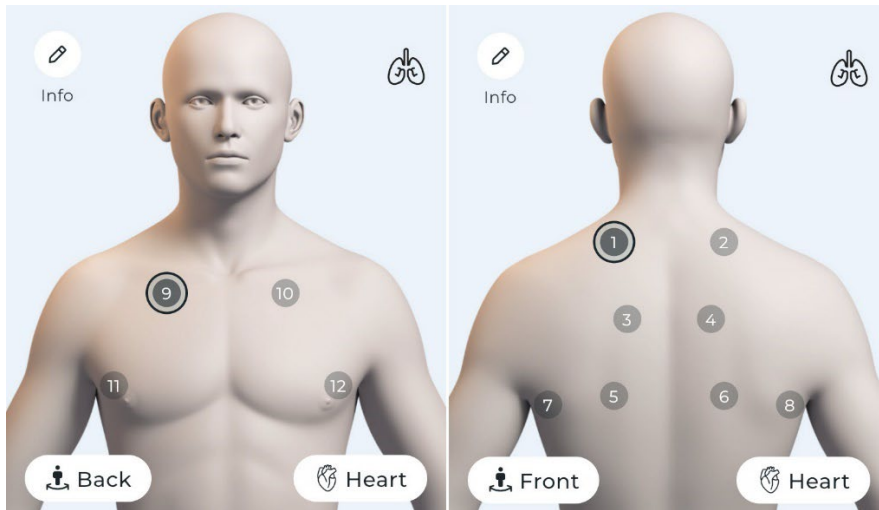


Figure 10. Lung auscultation spots

Follow the recommendations described in section [5.1. Smartphone Placement](#).

7. Listen to the chest sound through your headphones. Listening will help you to find the best spot on your body. Adjust the position of the phone slightly until you can hear strong, clear sound.

When recording heart sounds, breathe normally. Don't hold your breath, as it can affect the heart rhythm.

When recording lung sounds, breathe through your mouth. Your breath should be deeper than normal, but it should not be noisy.

You might notice that the loudness of the sound is not the same at each spot. This is normal, as it depends on individual body types and body positions. Sounds can also vary from person to person.

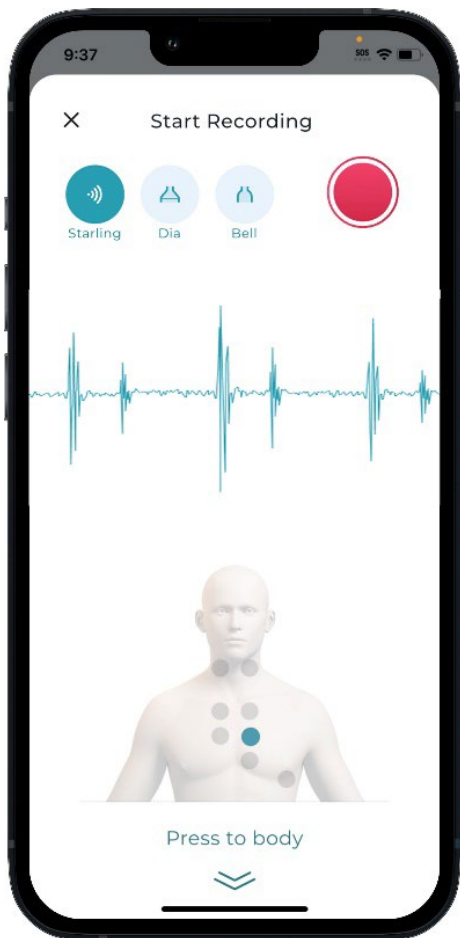


Figure 11. Start Recording screen (Doctor Mode enabled)

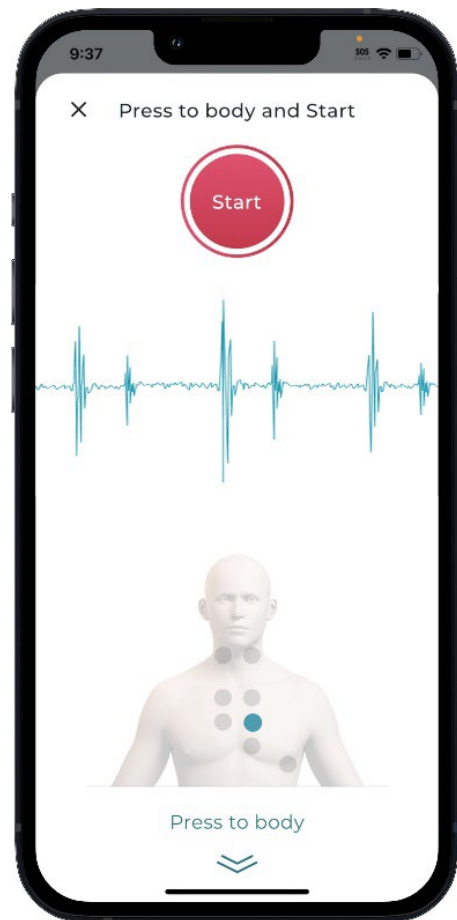



Figure 12. Start Recording screen (Doctor Mode disabled)

8. To initiate a recording, tap **Start**  at the top of the Start Recording screen. A 20-second countdown timer will now appear on the screen and recording will begin. The recording duration and playback time of the saved recording is set to 20 seconds. Short recordings under 20 seconds will not be saved.

You will be able to continue listening to the chest sounds with your Bluetooth headphones and see a visualization of the signal on the screen (an oscillogram) while the recording is in progress.

If you are using Stethophone with Doctor Mode enabled, sound filters are available to enhance the audibility of the specific chest sounds when listening in real time. You can select one of the sound filters - Starling, Bell, or Diaphragm - on the Start Recording screen, and listen with the applied filter on the Start Recording and Recording in Progress screens. The default filter for lung body spots is Diaphragm (Dia). The default filter for heart body spots is Starling.



Figure 13. Recording screen

6.2. Playing back saved recordings

Once a recording is complete, you will be taken to the Examination screen. The body spot with the saved recording will be highlighted and an oscillogram of the saved recording will be displayed at the bottom of the screen.

You can play back the saved recording and oscillogram by tapping Play at the bottom of the Examination screen. You can also apply sound filters to the recording playback by tapping the current Filter icon (🔊 🔊 🔊) on the lower right and selecting a new filter from the list. The recording can be played at a slower speed to listen to the recorded sounds more closely. To adjust playback speed, tap the Speed **x1.0** icon in the lower left and the speed will change on each tap.

You also have the option to play back a recording in the expanded mode to see a full-screen representation of the sound as a spectrogram or oscillogram, helpful for visual sound assessment. To navigate to the **Expanded mode** screen, tap the Expand **^** button at the bottom of the Examination screen.

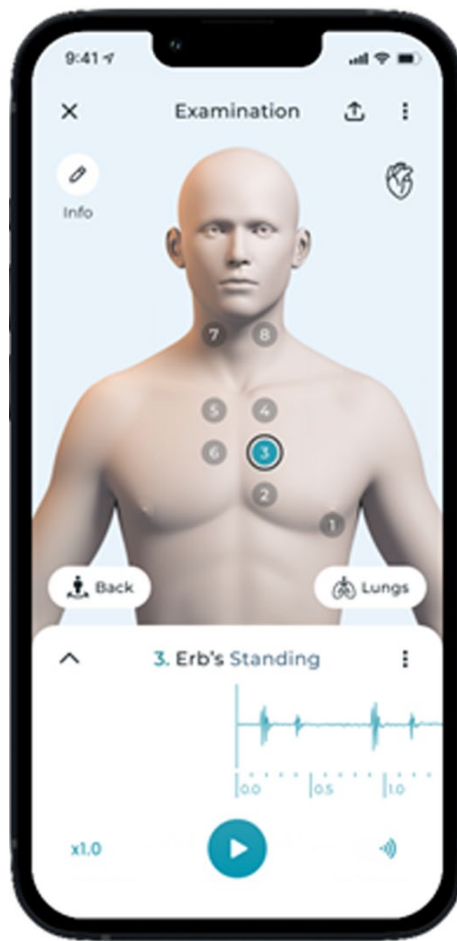





Figure 14. Saved recording playback. Collapsed mode.

To switch between **Oscillogram** and **Spectrogram**, tap the Spectro or Oscillo button  / , depending on the currently selected visualization type in the expanded mode.

To **pan** graphs left/right or move recording playback backward/forward, drag your finger horizontally across the screen, both in the expanded and the collapsed modes.

To **zoom** the oscillogram and spectrogram use the pinch open/close gesture in the expanded mode. If the display and playback settings i.e., scroll, zoom, speed, and filter options are applied to one of the graphs, the same settings will be applied to the other graph when switching between them.

To **replace** or **delete** unwanted or poor-quality recordings, select the body spot with the recording and tap the Recording options button  on the Examination or Expanded mode screen. Once the Recording bottom sheet is displayed, select the Record Again or Delete Record option.

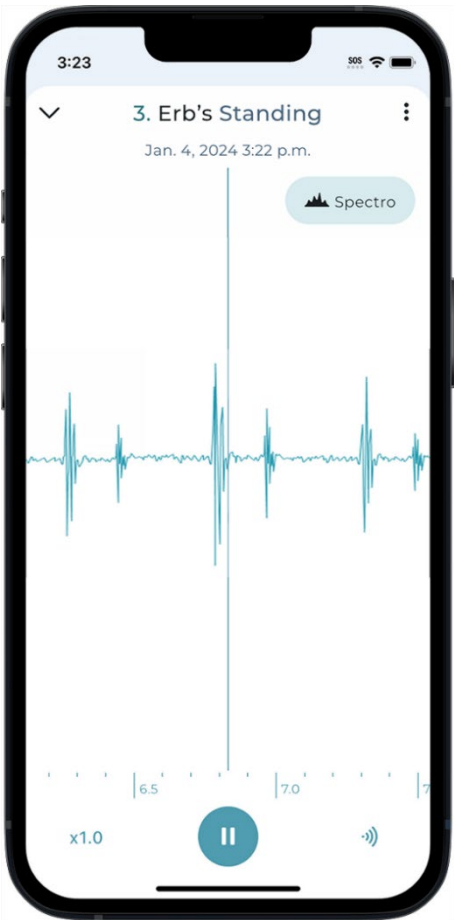


Figure 15. Saved recording playback. Expanded mode. Oscillogram view

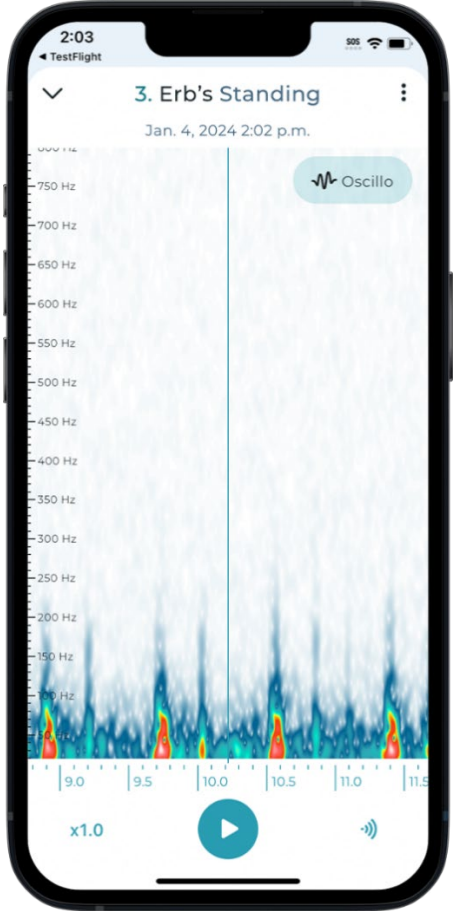


Figure 16. Saved recording playback. Expanded mode. Spectrogram view

6.3. Using sound visualization

Sound visualization is a powerful information tool that illustrates the loudness and frequency of a sound, and the presence or absence of different symptoms and artifacts. The oscillogram and spectrogram views are implemented in Stethophone to perform visual analysis of auscultation sounds.

The oscillogram is used for visualizing real-time and recorded sounds. Its waveform is dependent on the applied filter.

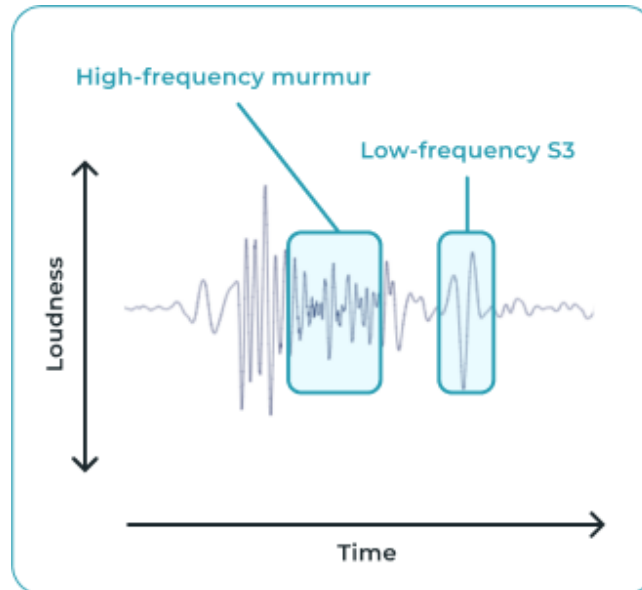


Figure 17. Oscillogram view

The spectrogram is used to visualize recorded sounds. It provides a more detailed visualization of the same sound. Applied filters do not impact the spectrogram display.

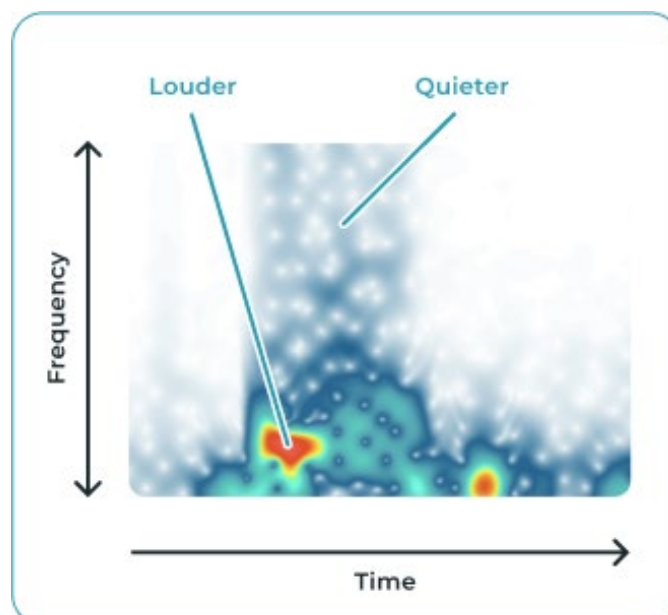


Figure 18. Spectrogram view

The spectrogram view is especially effective for identifying low-frequency sounds (such as an S3 heart sound). Below you can see how the spectrogram view could be used to analyze body sounds and find different abnormalities:

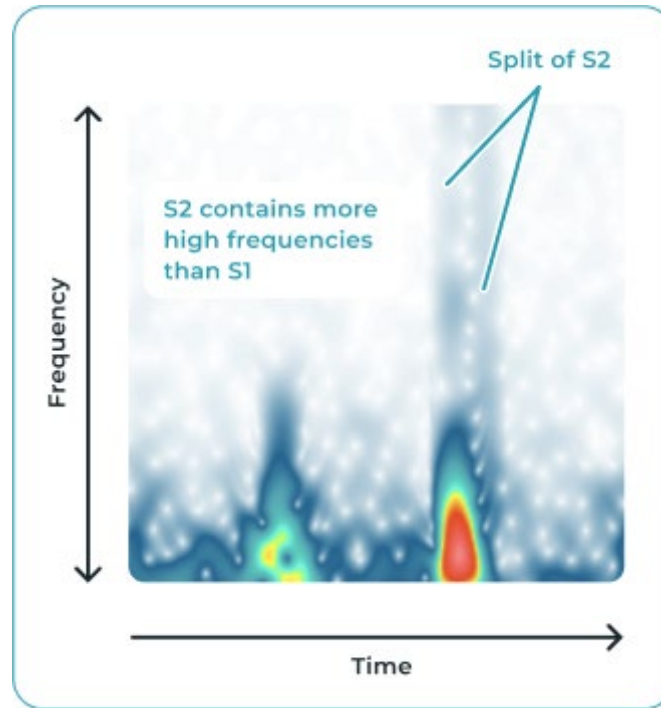


Figure 19. Spectrogram. Normal heart sound

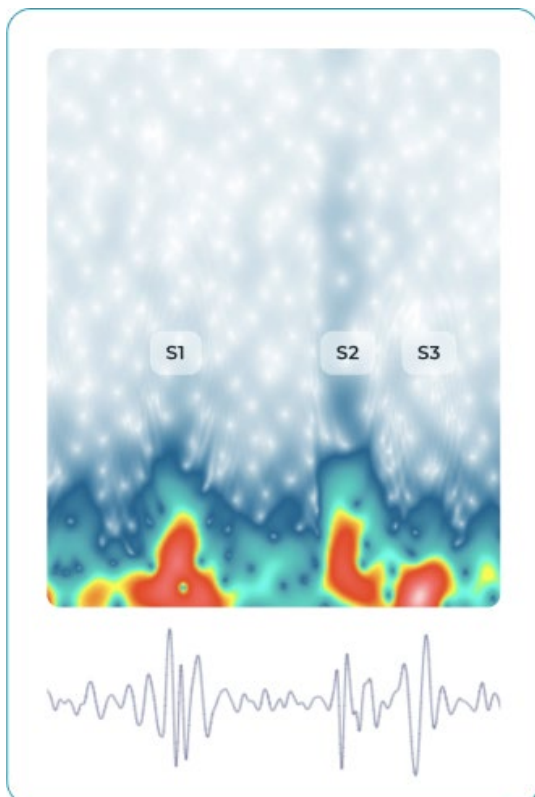


Figure 20. S3 gallop, heart failure

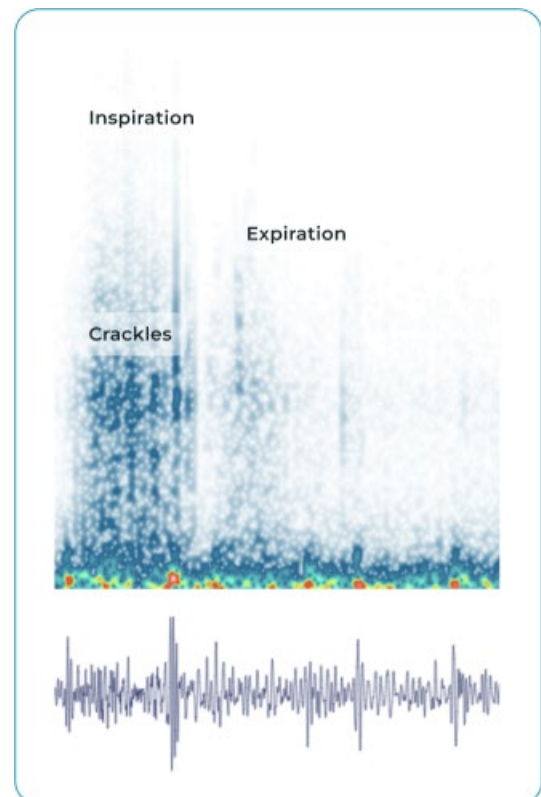


Figure 21. Interstitial lung disease

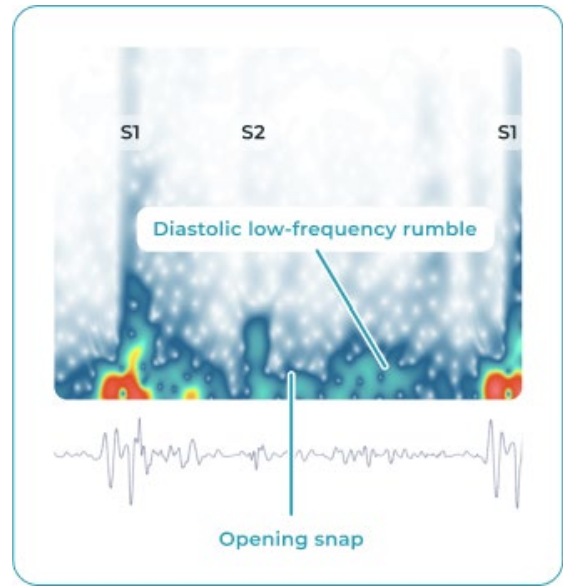
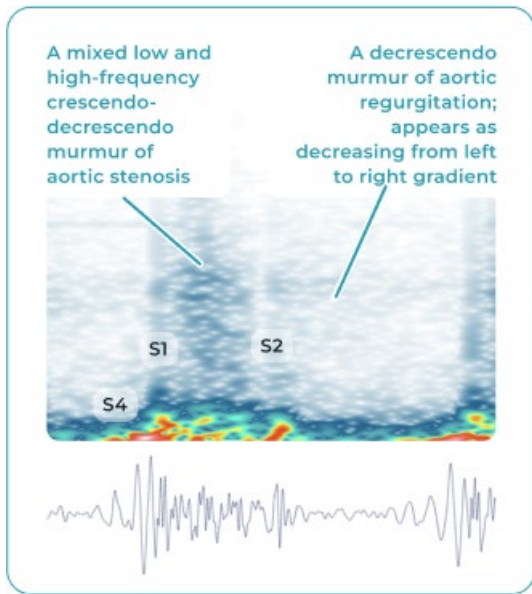



Figure 22. Aortic stenosis and regurgitation

Figure 23. Mitral stenosis

6.4. Providing additional information

You can provide your doctor with more details about yourself and about this examination when you fill out relevant fields on the Information screen. To navigate to the Information screen, tap the Info  icon in the top-left corner of the Examination screen.

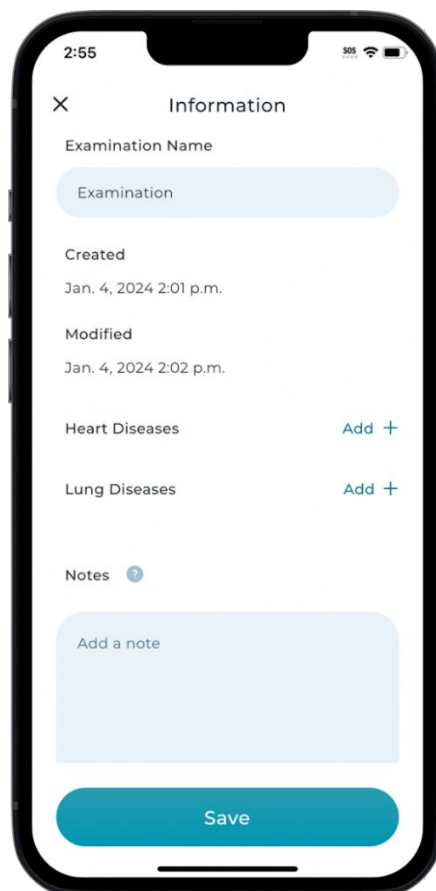


Figure 24. Examination information screen

Rename your examination so you can easily identify it later in the list of examinations (e.g., Chest pain after workout). Enter your age and weight. Add known diseases and any other valuable information. You can save text notes on this screen about what exactly happened and when.

Once any additional information is saved within the examination, the Info icon will be marked with a blue dot.

NOTE: Do not keep personal identification information in the Info screen.

6.5. Accessing saved examinations

To open the list of saved examinations:

- From the Stethoscope page: swipe the Stethoscope screen down or tap the Close button.
- From the Examination page: swipe the Examination screen down or tap the Close button.

Examinations are sorted by the Date Created so that the most recently created examinations are always at the top of the list.

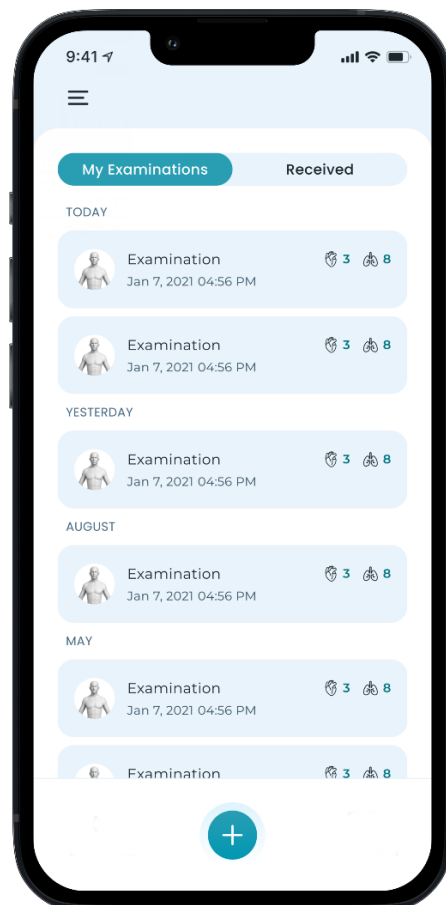


Figure 25. My examinations

The examination card contains the examination name, the date when the examination was created, and the number of heart and lung recordings saved in the examination.

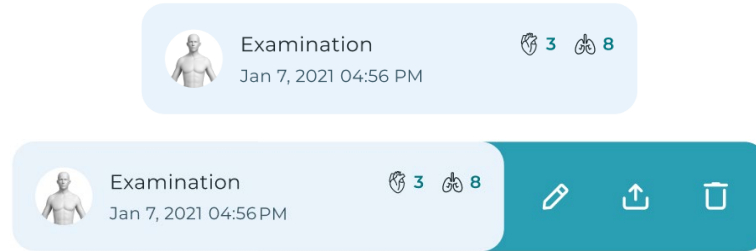








Figure 26. Examination card

To open an examination, tap the selected examination card.



To edit an examination, swipe left on the examination card and tap Edit  or open the examination and tap either the Info icon  or tap  and select Edit Examination.

To delete an examination, swipe left on the examination card and tap Delete , or open the examination and select the Delete Examination option from the  menu on the upper right.

To send an examination to another person, swipe left on the examination card and tap Send , or you can send from inside the examination; see section [6.6 Sending Examinations](#).

6.6. Sending examinations

When your examination has at least one saved recording, you can send the examination to another person. For example, you can send your examination to your physician for assessment.

There are two ways to send an examination. You can swipe left on the examination card on the My Examinations screen and tap Send  or you can send it directly from the Examination by tapping Send  in the upper-right corner of the Examination screen.

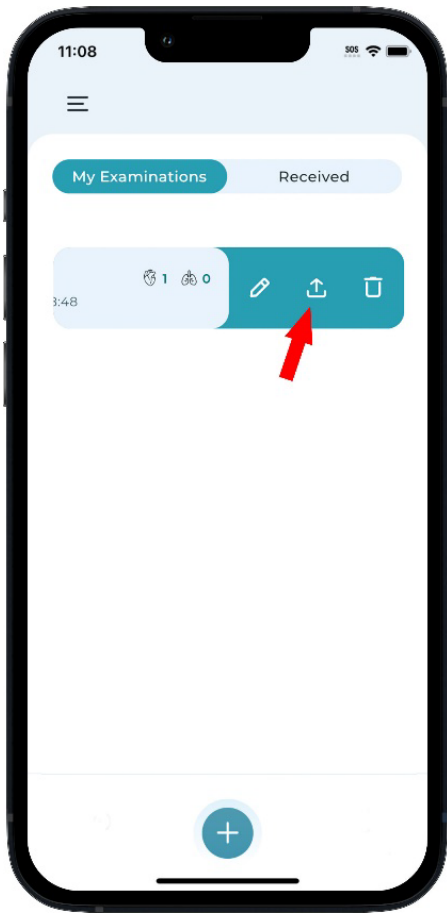


Figure 27. Sending from My Examinations

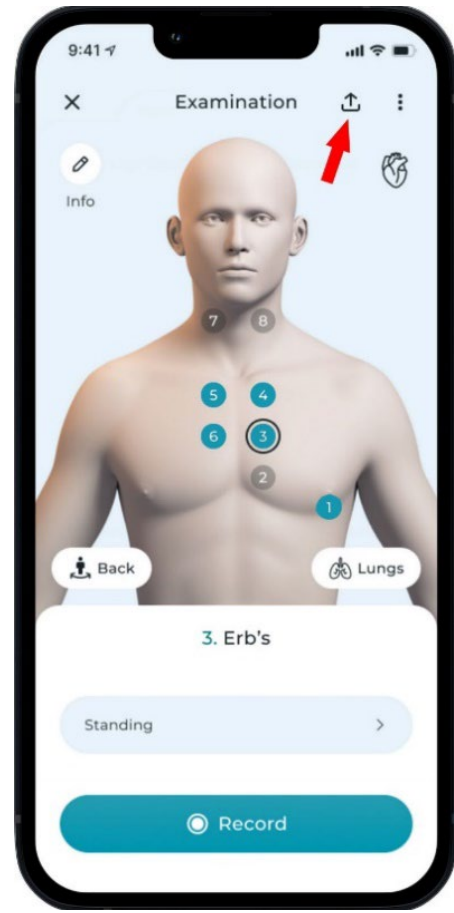


Figure 28. Sending from Examination

Confirm that you are sending your own data or that you have the permission of the data owner to send it for them. Confirm that you have read and understood the Acknowledgements. Confirm that the information you are sending is truthful and correct to the best of your knowledge. The Stethophone application will create a link that you can send to the desired recipient.

Your phone will present you with a selection of available external applications you can use to send your examination link (email, iMessage, etc.) Follow your phone's instructions from there.

NOTE: If you update an examination after sending, the recipient will not receive your updates unless you send the examination again. If you delete an examination after sending, it will not affect any information that has already been sent to another person.

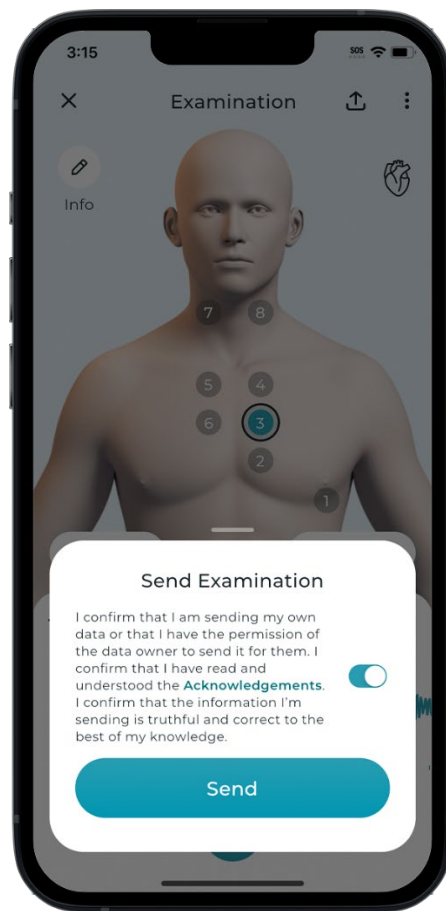


Figure 29. Sending confirmation

6.7. Receiving examinations

When you receive an examination link from another person, simply tap the link and it will open your Stethophone application and present you with the examination for review. It will also automatically add the received examination to your Stethophone account. Once the received examination link is used, it will expire.

Examinations you have received will appear as examination cards in the Received section of the Examination screen. Each examination card contains the examination name; the date when the examination was received, the sender's email address; and the number of heart and lung recordings saved in the examination.

You can listen to the recordings in the examination and edit the examination information. However, you cannot modify or replace recordings made by another person.

You can delete the examination if you don't need it. If you edit or delete the received examination, it will not impact the original examination on the sender's account.

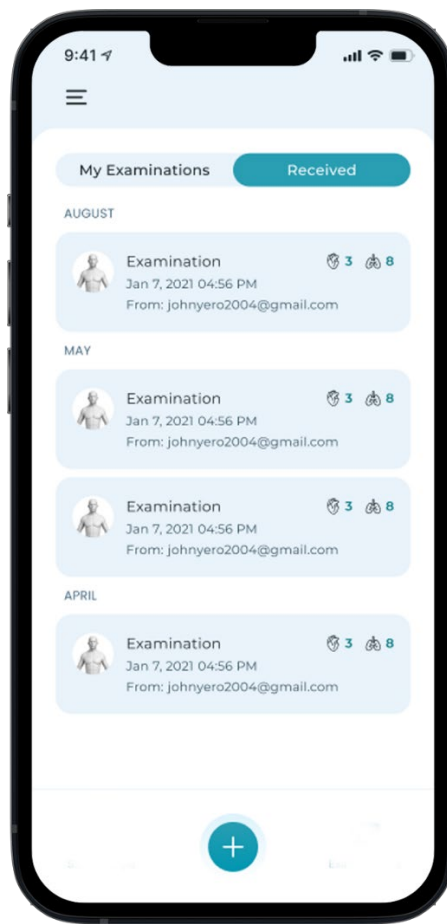



Figure 30. Received examinations.

7. Stethophone settings

You can manage Stethophone settings in the Settings section. To open the Settings section, tap Menu  in the upper-left corner of the My Examinations screen.

Stethophone settings include the following sections:

- **User Guides.** The User Guides section includes the following: How to use Stethophone, How to choose sound filters, How to analyze sound, and Stethophone User Guide.
- **Give feedback button** (see [7.1 Sending Feedback](#) section below).
- **Doctor Mode.** Some functionality may not be necessary for home users. To make the application easier to use, Stethophone offers the Doctor Mode toggle which will hide/display certain features, such Stethoscope, ability to change the playback speed, and selection between sound filters. Keep Doctor Mode off to hide those extra features, or keep all functionality enabled for your own interest.

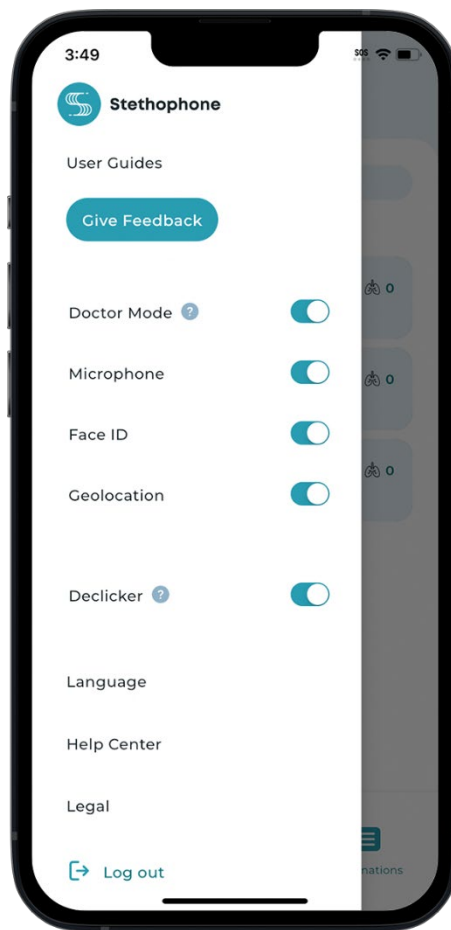



Figure 31. Stethophone settings

- **Microphone:** enables and disables Stethophone access to the microphone.

IMPORTANT: Microphone must be enabled in order to conduct any recording or live listening activities.

- **Face ID:** enables and disables the ability to log into Stethophone using Face ID. For older phone models Touch ID can be used instead of Face ID.

NOTE: If the Face ID toggle is not displayed in the Settings menu, check your smartphone settings to ensure that Stethophone has access to Face ID.

- **Geolocation:** enables and disables Stethophone access to geolocation.
- **Declicker** (see [7.2 Using Declicker](#) section below).
- **Language:** tap to change the application language.
- **Help Center:** tap to contact the Stethophone support team.
- **Legal:** this section includes Regulatory Information and legal documentation: Disclaimer, Terms & Conditions, and Privacy Policy.
- **Log out:** tap the Log out  link to log out of your Stethophone account.

7.1. Sending feedback

You can provide feedback about your experience with Stethophone in **Settings >> Give Feedback**.

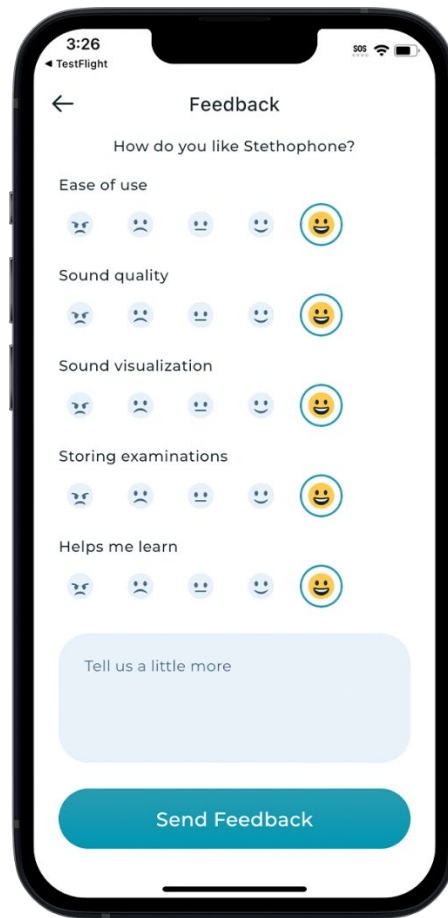


Figure 32. Sending feedback

To send feedback, rate your experience from 1 to 5 according to the suggested criteria: “Ease of use”, “Sound quality”, “Sound visualization”, “Storing examinations”, and “Helps me learn”.

You can also report an issue, send a suggestion, or share your opinion about Stethophone in the notes box. This feedback will be sent to our support team.

7.2. Using Declicker

Declicker removes the unwanted sounds of friction between the smartphone and your body. Declicker is active only when the smartphone is moving along your skin and causing unwanted, loud tapping sounds. It doesn't affect the chest sound filters.

You can enable or disable the Declicker function in Stethophone **Settings >> Declicker**. The Declicker function is enabled by default in the Stethophone settings.

It is recommended that Declicker be enabled at all times except in special cases, such as users with mechanical valves (such valves make a sound on different frequencies than biological sounds and Declicker could remove them).

7.3. Removing saved login credentials

Face ID (or Touch ID on older phone models) allows you to access any Stethophone account that was added to your Stethophone application by selecting the account from the list.

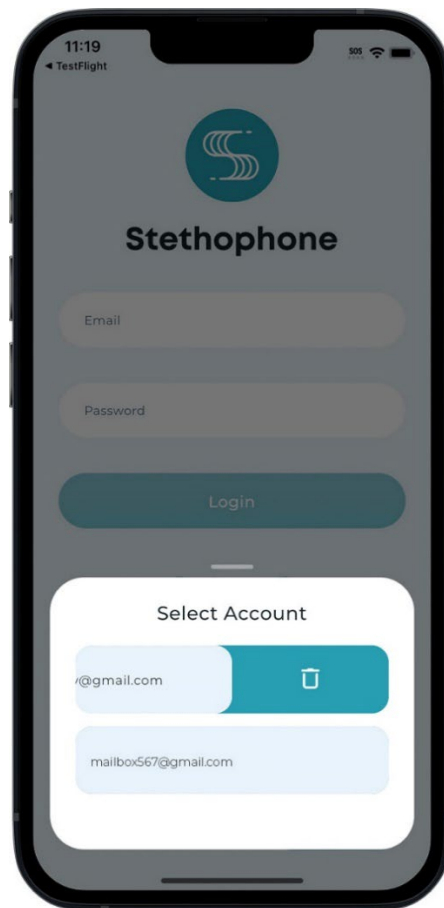


Figure 33. Removing account

To remove one of multiple Stethophone accounts from the Stethophone application on your smartphone, swipe left on the account card when logging in with Face ID and tap Delete .

NOTE: This will only remove the Stethophone account credentials from the account selection on the Login screen without completely deleting that account. The account credentials can be re-added later.

7.4. Deleting an account

You can delete your Stethophone account completely.

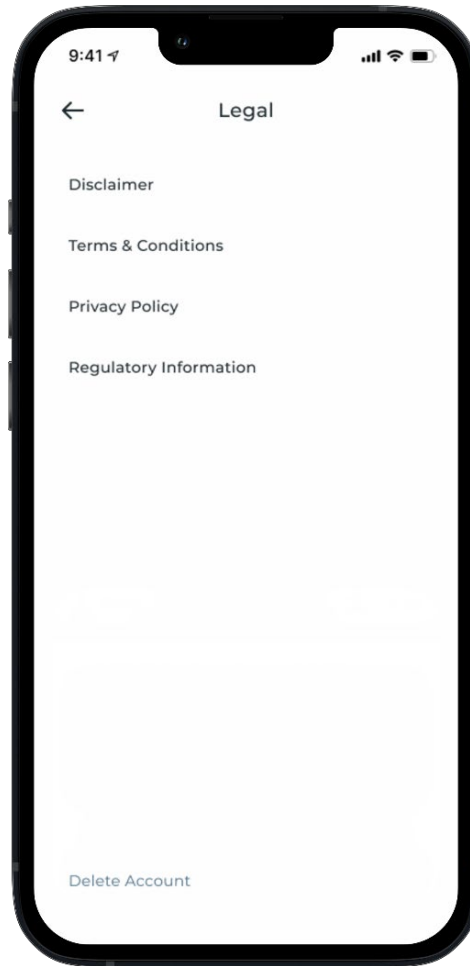
















Figure 34. Account deletion
















To delete an account:














1. Open **Settings >> Legal**, and tap the **Delete Account** link at the bottom of the screen.
2. Confirm the account deletion on the confirmation screen.

NOTE: After your account has been deleted, you won't be able to log into Stethophone using the deleted login anymore. Once a user account is deleted, it cannot be restored. You can register again with the same email address or with a new one.

Appendix 1 Explanation of icons

General	
	Stethophone logo
	Settings
	Loading
	Stethoscope
	List of examinations
	Close the screen
	Add
	Expand the section
	Collapse the section
	Back
	Log out
	Fingerprint
	Feedback icon
Examinations	
	New examination

	Delete email/examination
	Body spot with a recording
	Body spot without a recording
	Lungs
	Heart
	Front/Back of the body
	Actions with an examination
	Add/Edit notes
	Send an examination
Sound recording	
	Indicator for placing the smartphone to your body
	Start recording
	Recording in progress
	Play the recording
	Pause the recording
	Diaphragm filter

	Bell filter
	Starling filter
	Actions with a recording
	Oscillogram
	Spectrogram
Notifications	
	Microphone
	Bluetooth headphones
	Link has expired
	Action successful
	Action unsuccessful / Error
	Help
	Internet connection problems
	Server error

Appendix 2 Troubleshooting

Issue	Solution
I cannot find Stethophone in the Google Play Store.	Currently, Stethophone is available for Apple iPhone users only.
I haven't received the registration/password reset email.	<ul style="list-style-type: none"> • Verify you are connected to the internet and able to receive emails. (Watch video [https://youtu.be/ec-V8-TMM4Y]) • Check the Spam folder of your email. • Try resending the email from the Sign Up/Reset Password page of Stethophone
I don't hear the chest sound.	<ul style="list-style-type: none"> • Verify your wireless headphones are connected properly. (Watch video [https://youtu.be/ec-V8-TMM4Y]) • Verify the volume of your phone is not muted and it is at least at 50-60%.
Sound quality is poor.	<ul style="list-style-type: none"> • Be sure to remove any phone case from your phone. • Use Stethophone in a low-noise environment. • Press the bottom of your phone perpendicular to your bare skin. (Watch video [https://youtu.be/ec-V8-TMM4Y]) • Do not apply too much pressure to the phone, but ensure it tightly touches the skin.
"Check your internet connection" message is displayed.	<p>If the system becomes unavailable due to networking, cloud, or connection problems, you will be shown this message. No further action is required. When the connection is restored, tap "Try again" and the application will continue working as intended.</p> <p>NOTE: While a connection issue is present, the Stethoscope feature will be still available for use.</p>
"Something went wrong. Service will be restored soon." message is displayed.	<p>When this message is displayed, the application will not be available for use. Try to restart the application. If the message is still displayed, please let us fix the underlying issue and simply try again later. Note, that the Stethoscope feature will still be available for use during this service interruption.</p>

Appendix 3 Help and assistance

Please contact the Stethophone team at support@stethophone.com if you need assistance or have any questions or concerns.

For more information, please visit: <https://stethophone.com>