User Manual

Version 1.1.5

CRYSTALSOUND INTRODUCTION 3
CrystalSound 3
My Voice Only 3
Privacy and Security 3
Apps work with CrystalSound 4
Using CrystalSound account on multiple devices 5
Requirements for CrystalSound 5
Connection requirements: 5
Hardware requirements: 6
USING CRYSTALSOUND 7
Getting started 7
Download and creating a CrystalSound account 7
Install CrystalSound 10
Install CrystalSound for Window 10
Install CrystalSound for MacOS 11
Install CrystalSound for Linux 15
Delete Account 17
Settings 19
Test audio setting 28
Invite friend to use CrystalSound 30
Update CrystalSound app 32
Features 37
My Voice Only function to suppress other people's voices 37
Bi-directional Noise reduction with CrystalSound 42
Voice effects with CrystalSound 45
Recording magic 47
Using CrystalSound 50
Setting up CrystalSound with Zoom 50
Setting up CrystalSound with Line 52
Setting up CrystalSound with Google Meet 54
Setting up CrystalSound with Teams 56
Setting up CrystalSound with Discord 58
Setting up CrystalSound with Facebook Messenger 60
Setting up CrystalSound with Skype 62
Setting up CrystalSound with Amazon Connect 64
Recording with CrystalSound 69
Troubleshooting and FAQ 70
Troubleshooting 70
Errors and Warnings 72

CRYSTALSOUND INTRODUCTION

CrystalSound

CrystalSound uses AI technology to suppress unwanted noise and distractions during calls, recordings, and online meetings. With its state-of-the-art algorithms and advanced features, CrystalSound can reduce background noise, echo, howling effects, chopiness, and other voices to ensure that you can communicate clearly and effectively.

My Voice Only

"My Voice Only" is a premium option that provides a unique benefit - the ability to isolate the user's voice and eliminate unwanted noise, including howling effects. Currently, no other application offers this capability. This feature is especially valuable in noisy environments or when you want to ensure that only your voice is heard, making it easier to transcribe, edit, or listen to the audio without any interference or distracting noise.

To activate this feature, simply click on "Register Voice ID" and enjoy the benefits of this feature. Users can easily turn this feature on or off in the main screen of CrystalSound and manage their voice profiles in the profiles settings.

Privacy and Security

During operations, CrystalSound processes your audio and your VoiceID locally. Your audio is private to you and we do not have access to your VoiceID nor we send your audio and voiceID out of your device.

To track usage time, CrystalSound collects:

- app version,
- current settings,
- email address,
- operating system,
- start-using time,
- end-using time,
- name of apps using CrystalSound's virtual speaker or microphone.

Paid users can turn off usage tracking in the app's settings.

When users report issues via the app's settings, two log files of the app will be sent to our backend for troubleshooting. These files include, along with the app's operational logs, the names of audio devices you have used, your email address, and app's settings.

CrystalSound Website and Backend are deployed on Vercel and we use the following Google's Firebase services for database, storage, cloud functions, and authentication:

- Cloud Firestore,
- Cloud Functions for Firebase,
- Cloud Storage for Firebase,
- Firebase Authentication.

These Firebase services and Vercel are certified under major privacy and security standards such as ISO 27001, ISO 27017, ISO 27018, SOC 1, SOC 2, SOC 3. In particular, for authentication purposes, Google's Firebase may store and use some or all of the following information:

- email addresses,
- passwords,
- phone numbers,
- user agents,
- IP addresses,

User agents and IP addresses are employed by Google to provide added security and prevent abuse during sign-up and authentication. IP addresses will be logged temporarily by Google's Firebase Authentication for a few weeks and will be removed automatically. Other information is retained in CrystalSound's database.

To delete your user information, please send your request to crystalsoundsupport@namitech.io. Once we delete your information, Google will ensure your information is removed from their live and backup systems of Firebase within 180 days.

See also:

- https://firebase.google.com/support/privacy
- https://vercel.com/security
- https://vercel.com/legal/privacy-policy

Apps work with CrystalSound

In order for an app or web app to function with CrystalSound, it must meet the following requirements:

- Capable of using virtual audio devices.
- Include specific audio settings where CrystalSound Microphone and Speaker can be selected.

For examples, the following apps will be able to use with CrystalSound:

- Desktop call apps: Microsoft Teams, Zoom, LINE Desktop, Viber Desktop, Genesys Cloud Desktop app, Avaya one-X® Communicator, most other softphone apps on Windows/MacOS, etc.
- Web call apps: Microsoft Teams, Google Meet, Amazon Connect CCP, Genesys Cloud WebRTC phone, most other web-based softphone apps that can work on Chrome/Edge browsers, etc.
- Audio recording apps: Audacity, Loom, Quicktime, etc.
- Streaming Clients: OBS, Streamlabs, etc.

- Desktop games with voice chat: League of Legends, Dota2, CSGO, Diablo 4

Using CrystalSound account on multiple devices

- The free package allows usage on up to two devices per account, with a usage time limit of 90 minutes per day. Users can increase the time limit per day by inviting friends to use CrystalSound. For each active friend, the time limit will be increased by 60 minutes without cap.
- Premium package used on up to two devices per account.

Requirements for CrystalSound

Connection requirements:

For authentication, CrystalSound must be able to connect to the following domains:

crystalsound.ai
auth.crystalsound.ai
crystalsound-mvo.firebaseapp.com
us-central1-crystalsound-mvo.cloudfunctions.net
securetoken.googleapis.com
identitytoolkit.googleapis.com
firestore.googleapis.com
Please whitelist the above domains if CrystalSound is running under proxied internet access.

Hardware requirements:

Operating System	Official minimum supported version	CPU	Disk	RAM
Mac OS	10.15 Catalina	Intel Broadwell 5th generation Core i3 @2GHz (2014 and later) Apple M1, M2	800 MB free space	4GB Recommended: 8GB
Window	Windows 10, version 1809	Intel Broadwell 5th generation Core i3 @2GHz (2014 and later) AMD Steamroller @2.0GHz	500 MB free space	4GB Recommended: 8GB
Linux	Ubuntu 20.04 Debian 10 Fedora 37	Intel Broadwell 5th generation Core i3 @2GHz (2014 and later) AMD Steamroller @2.0GHz	500 MB free space	4GB Recommended: 8GB

USING CRYSTALSOUND

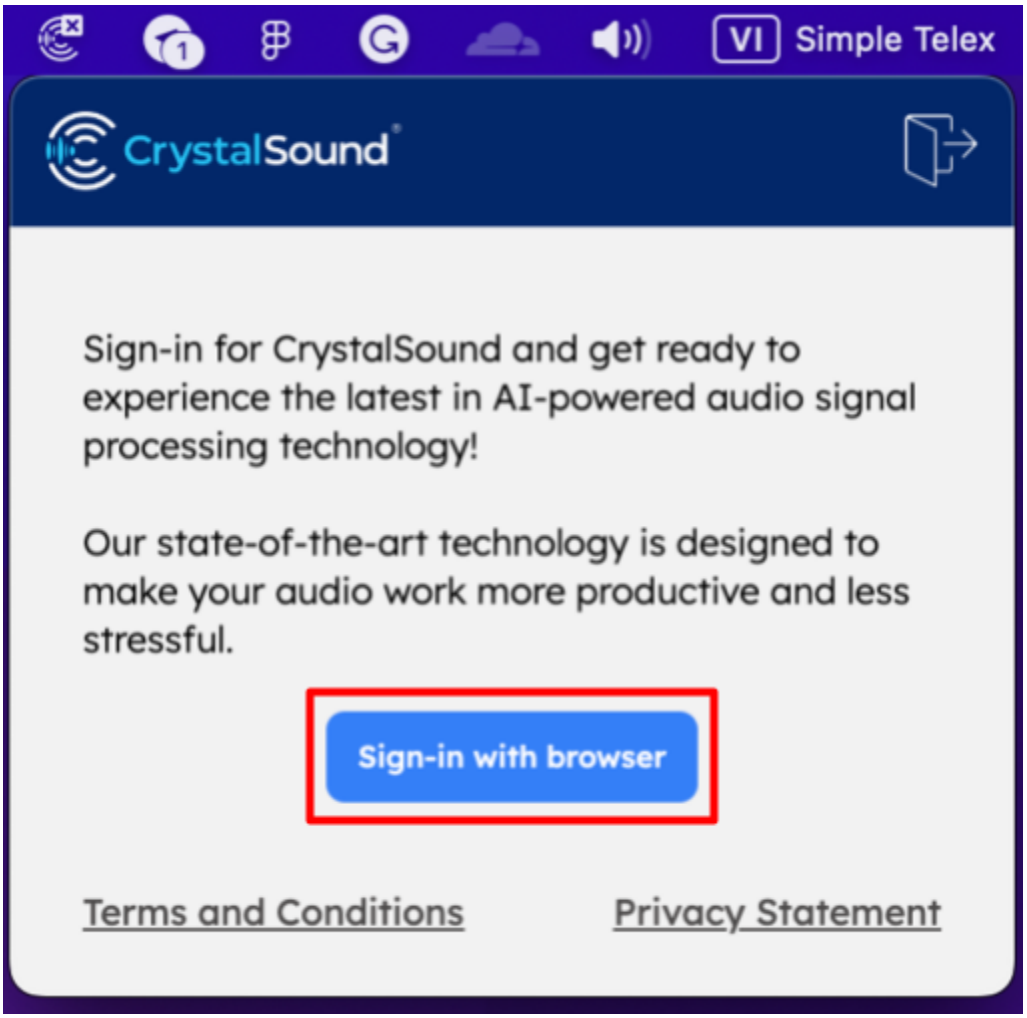
Getting started

Download and creating a CrystalSound account

If you haven't downloaded the application yet, please download the installation file at https://crystalsound.ai/dashboard/download. Make sure to select the correct package for your operating system.

To use the CrystalSound desktop app, you first need to create a CrystalSound account. This guide will provide you with instructions on how to create a CrystalSound account.

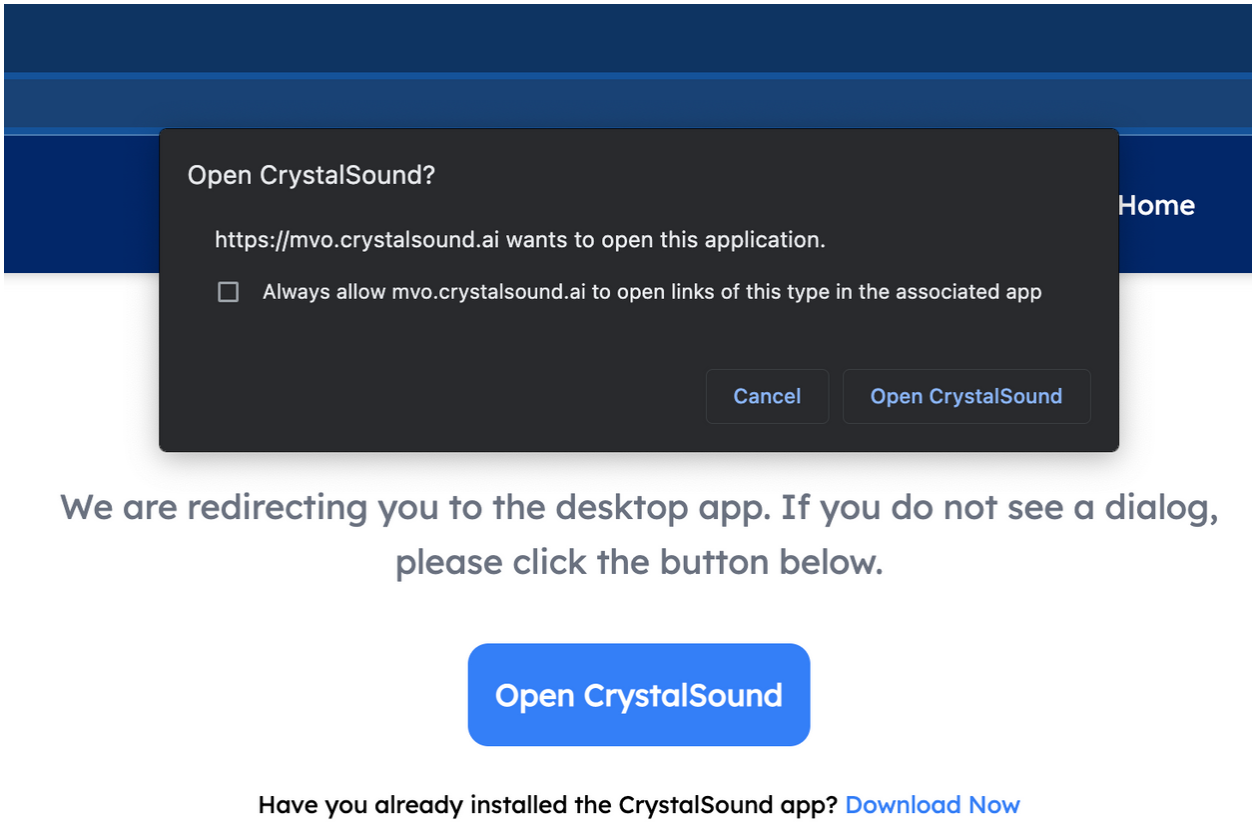
1. Open the CrystalSound then click on "Sign in".



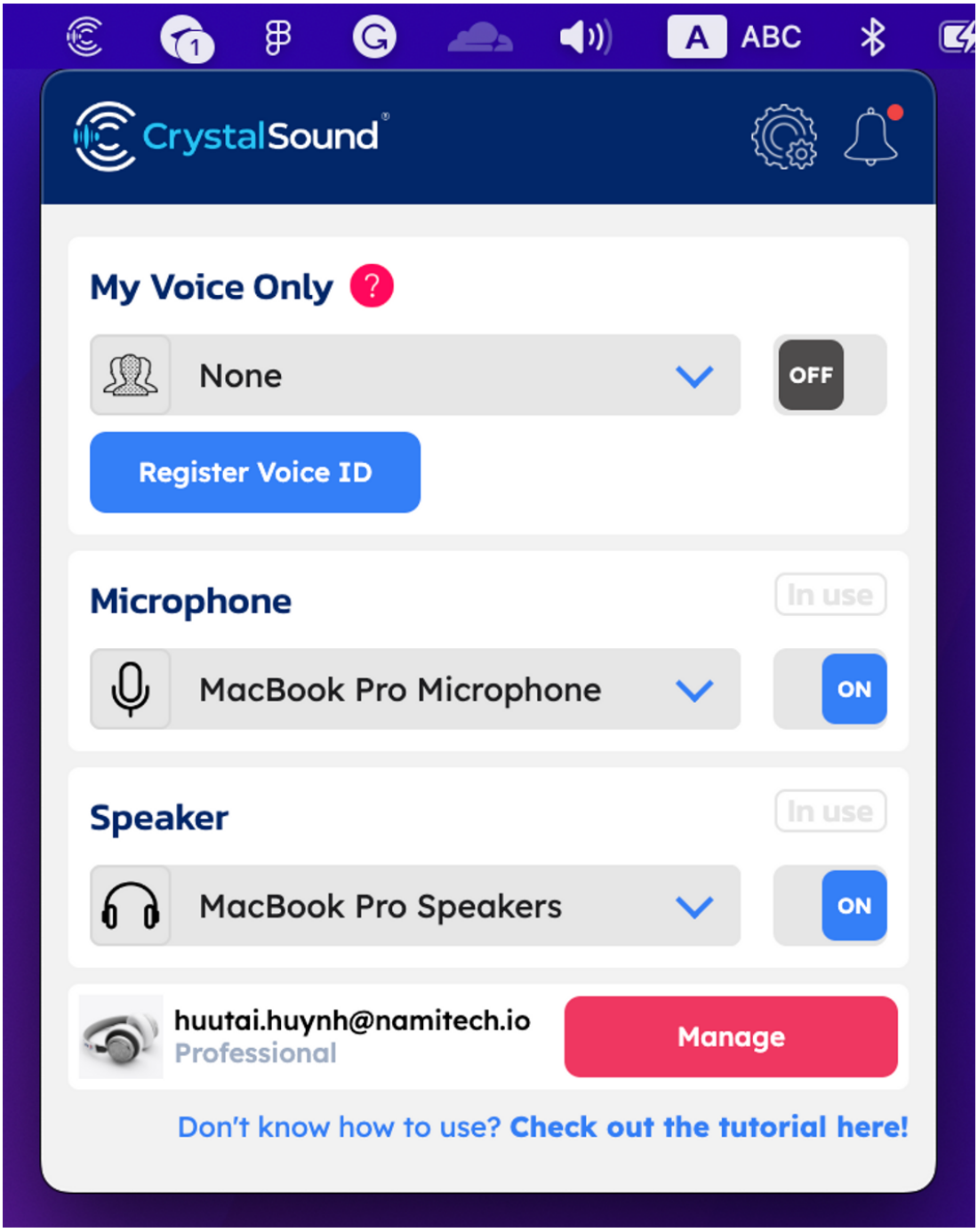
2. The application will open your browser and prompt you to sign in:

- If you are using a Gmail or G Suite email account, click "Sign in with Google."
- If you are using an Outlook or Microsoft 365 email account, click "Sign in with Microsoft."

3. A successful sign-in will prompt a box to open the CrystalSound application.



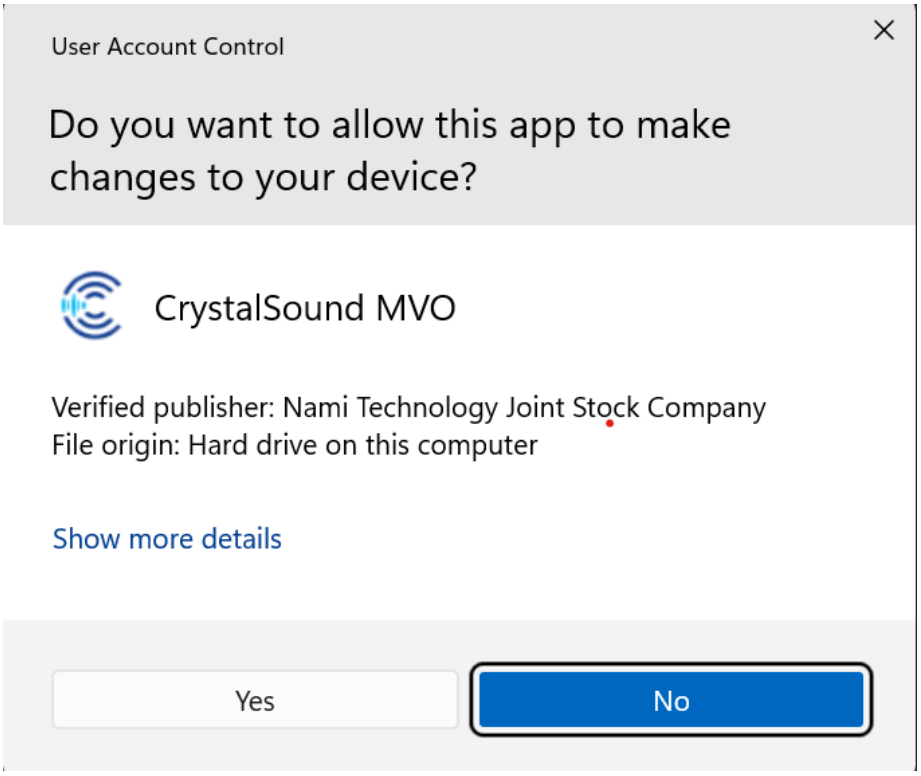
4. This is the homepage of the CrystalSound application. You can start using the application now.



Install CrystalSound

Install CrystalSound for Window

1. Open the installation package.



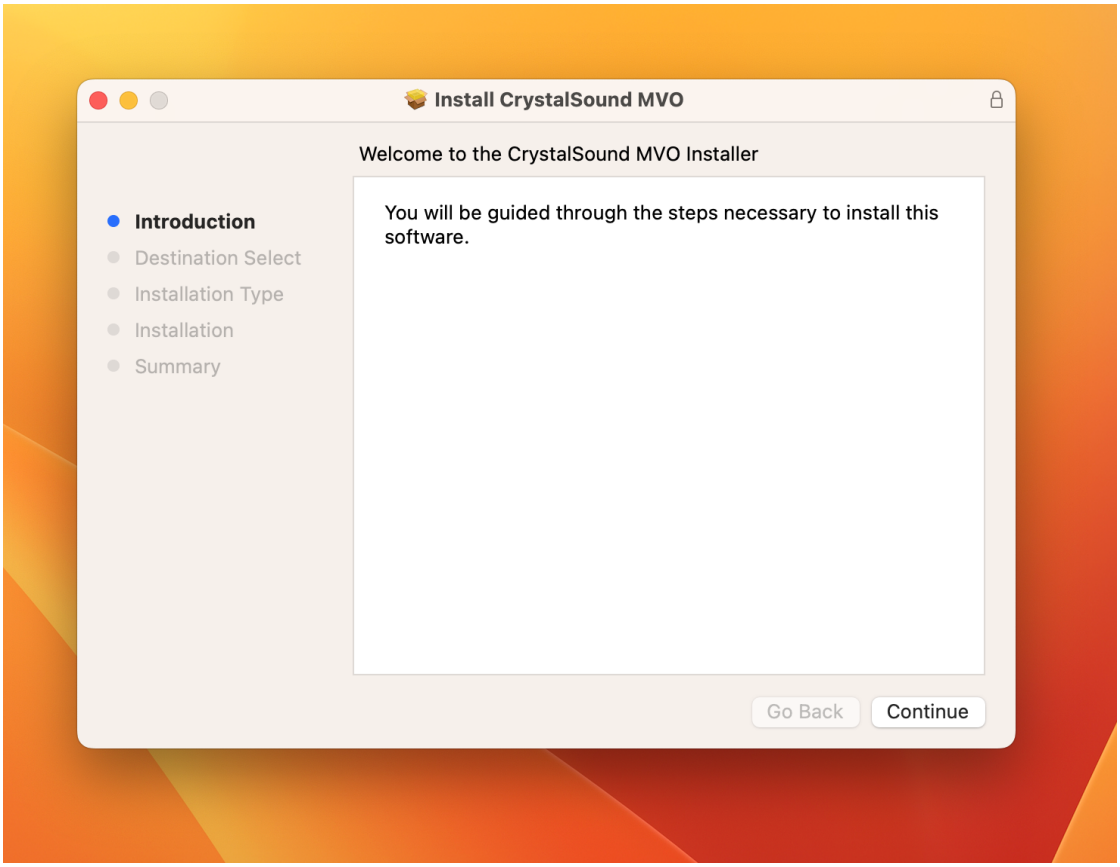
2. Click Yes and follow the instructions provided in the package.

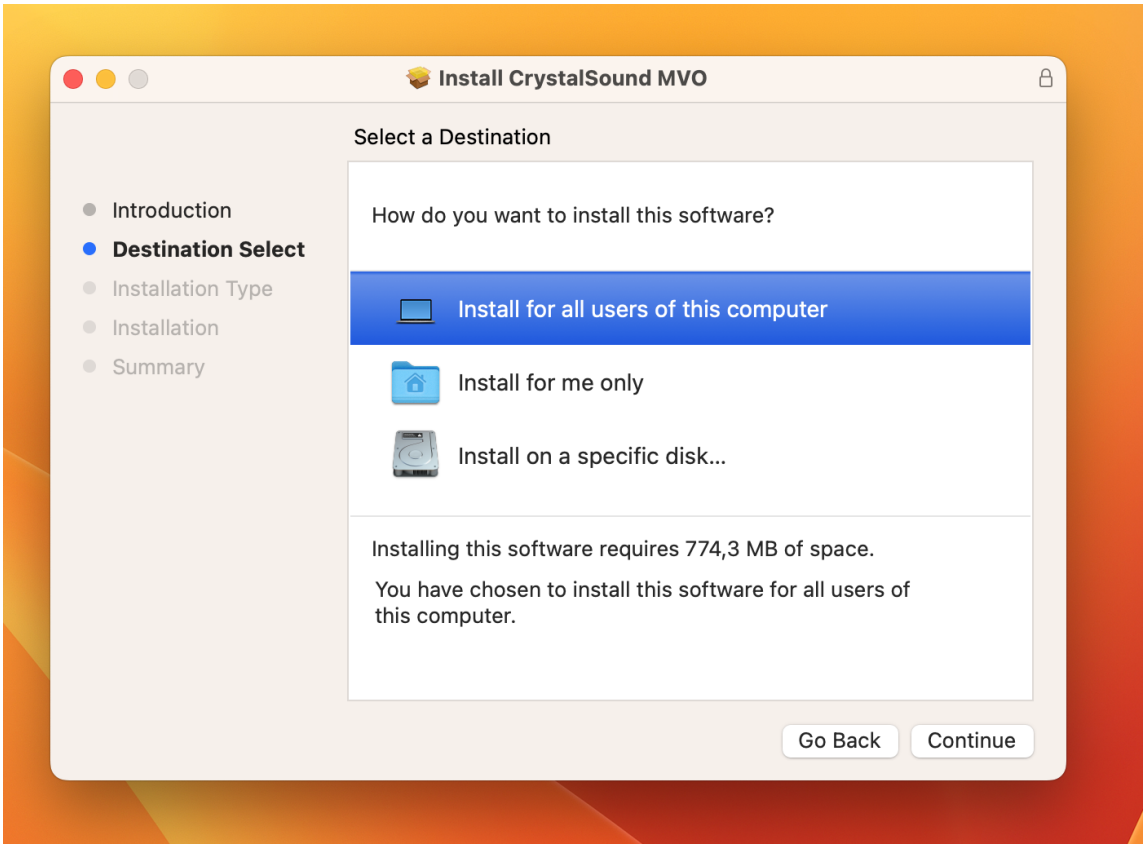
3. The process will run very quickly, and you will see the Completed screen. Check "Run CrystalSound MVO" and click "Finish."

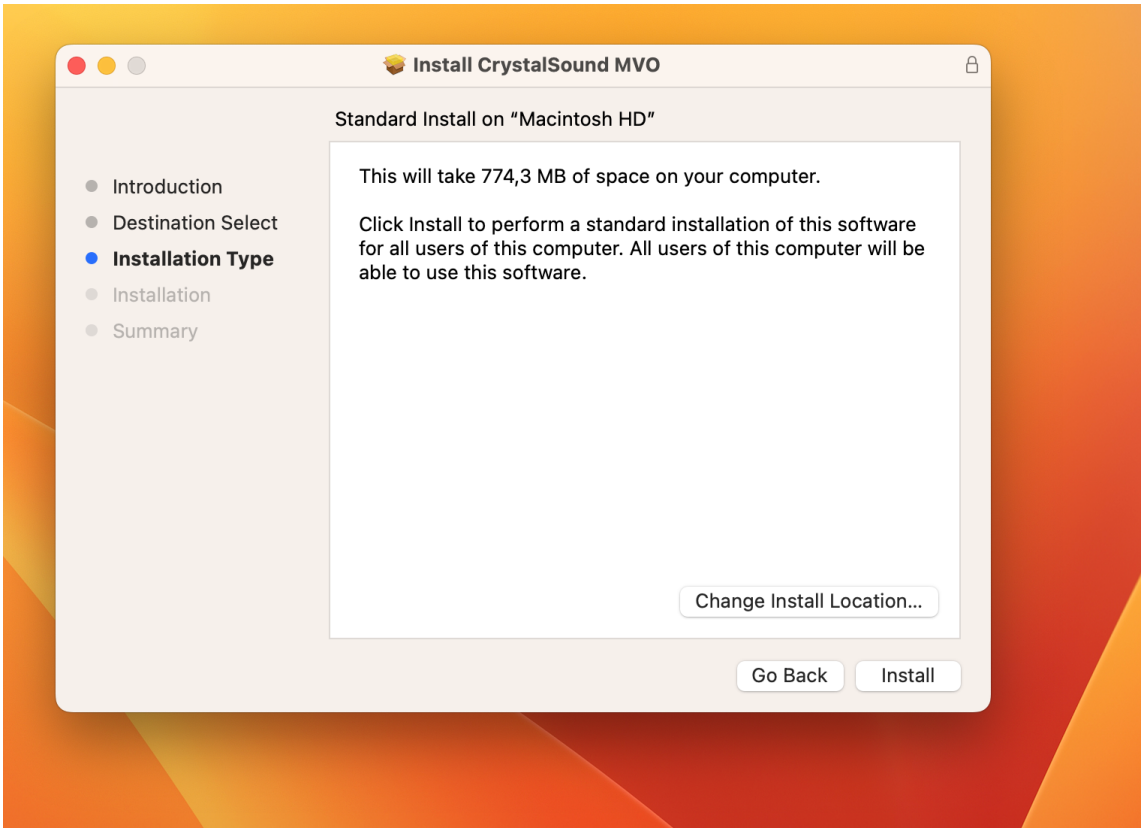
Install CrystalSound for MacOS

To install CrystalSound - My Voice Only on your computer, follow these steps:

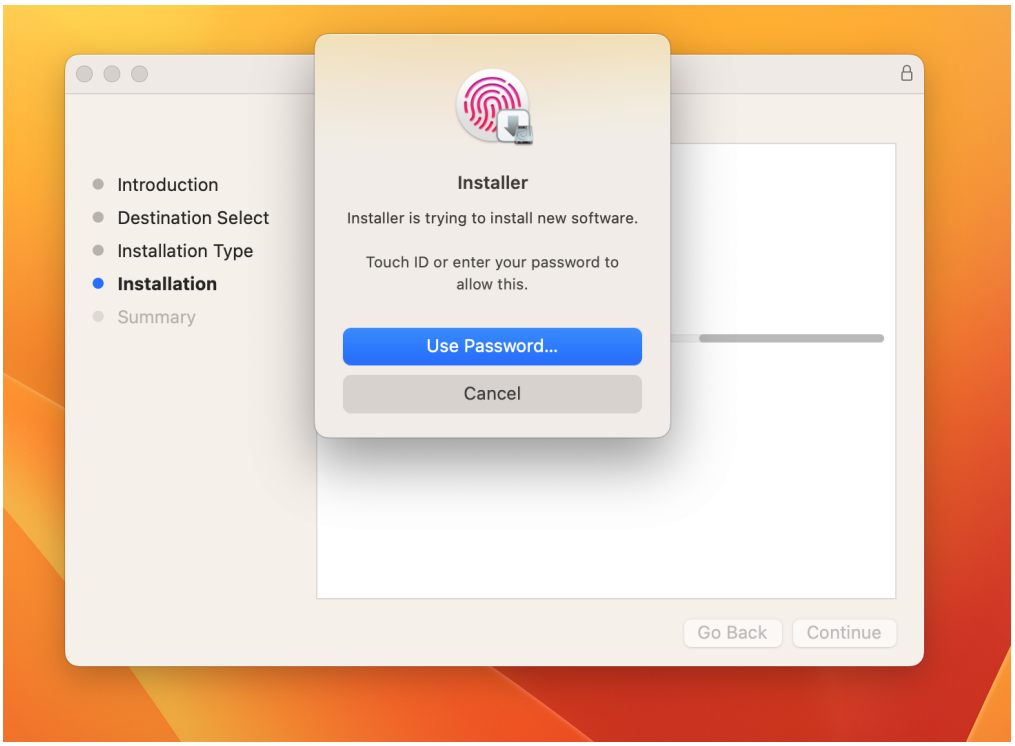
1. Open the installation package.
2. Follow the instructions provided in the package.



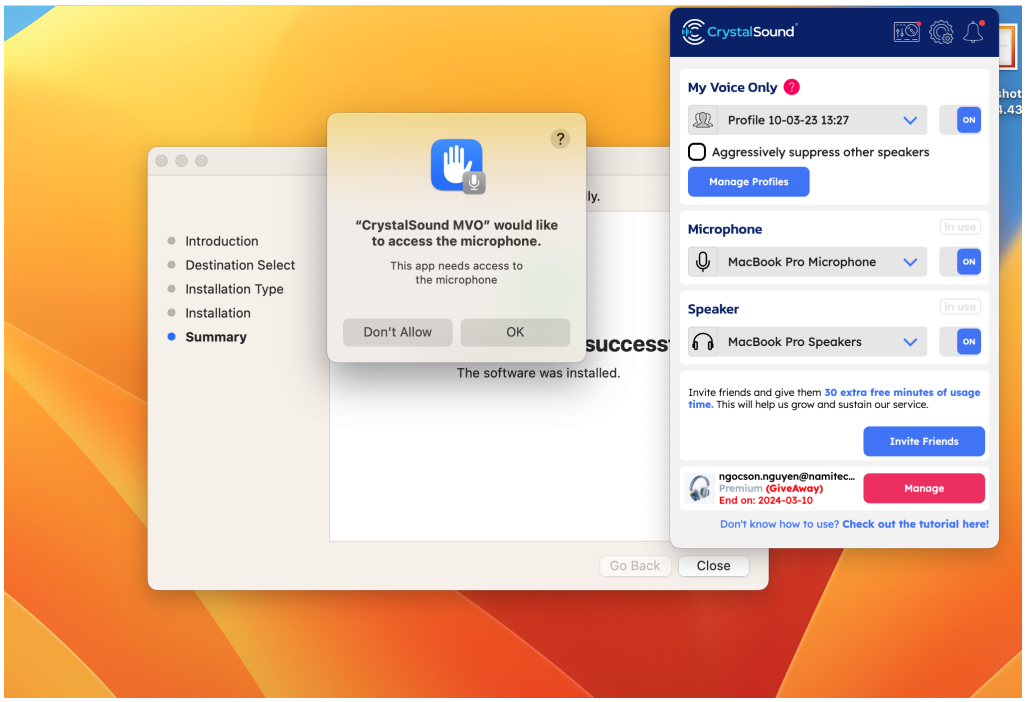

Install CrystalSound MVO
Select a Destination
Introduction
Destination Select
Installation Type
Installation
Summary
How do you want to install this software?
Install for all users of this computer
Install for me only
Install on a specific disk...
Installing this software requires 774,3 MB of space.
You have chosen to install this software for all users of this computer.
Go Back
Continue


Install CrystalSound MVO
Standard Install on "Macintosh HD"
Introduction
Destination Select
Installation Type
Installation
Summary
This will take 774,3 MB of space on your computer.
Click Install to perform a standard installation of this software for all users of this computer. All users of this computer will be able to use this software.
Change Install Location...
Go Back
Install

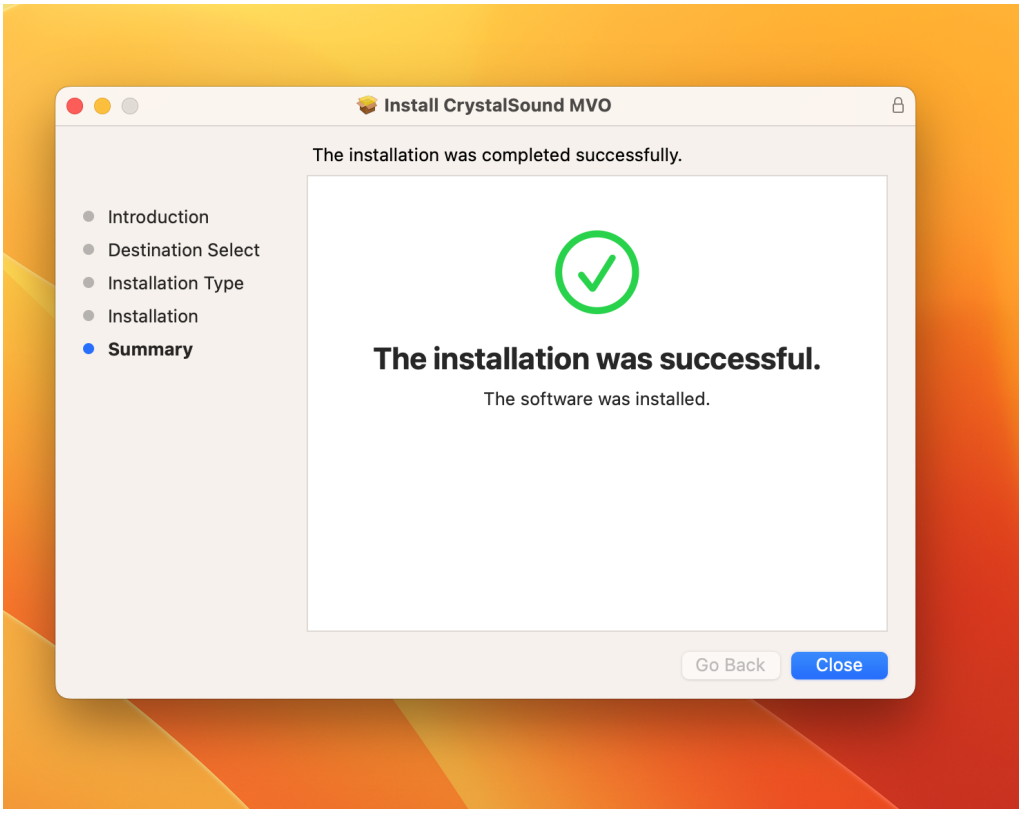
3. You will need admin permission to install the application.



4. Then, you will need to give permission to the application to access the microphone.

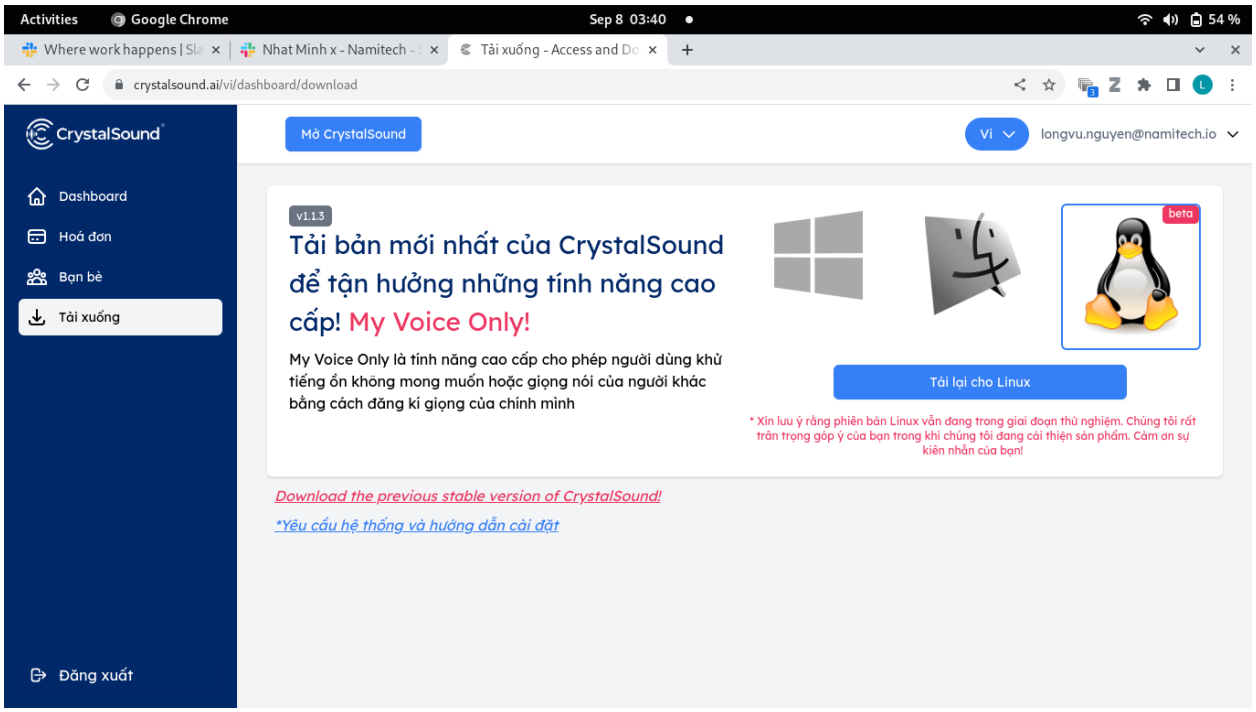


5. After that, the installation is complete.



Install CrystalSound for Linux

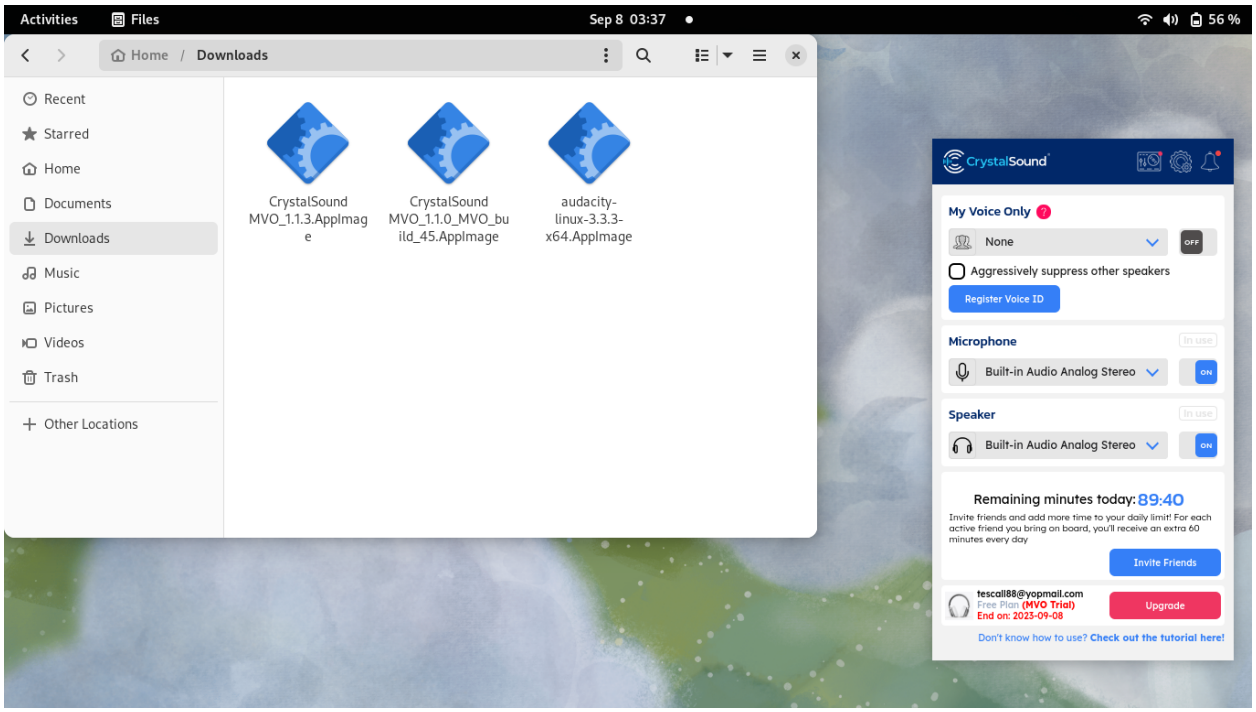
1. Download link for the CrystalSound on Linux (it typically has a ".AppImage" file extension).



2. Set permissions in Linux:
Method 1:
Right-click the downloaded file.
Select "Profile" from the context menu.
In the "Permissions" tab, click the "Allow Executing File As Program" checkbox.

Method 2:
You need to run the following command: permission command for Ubuntu/Fedora
chmod + x <filename>

3. Run CrystalSound by simply doubleclick on the AppImage file.



Note: When using AppImage, please ensure that you install the necessary dependencies. To install fuse and libfuse2, you can use the following command:

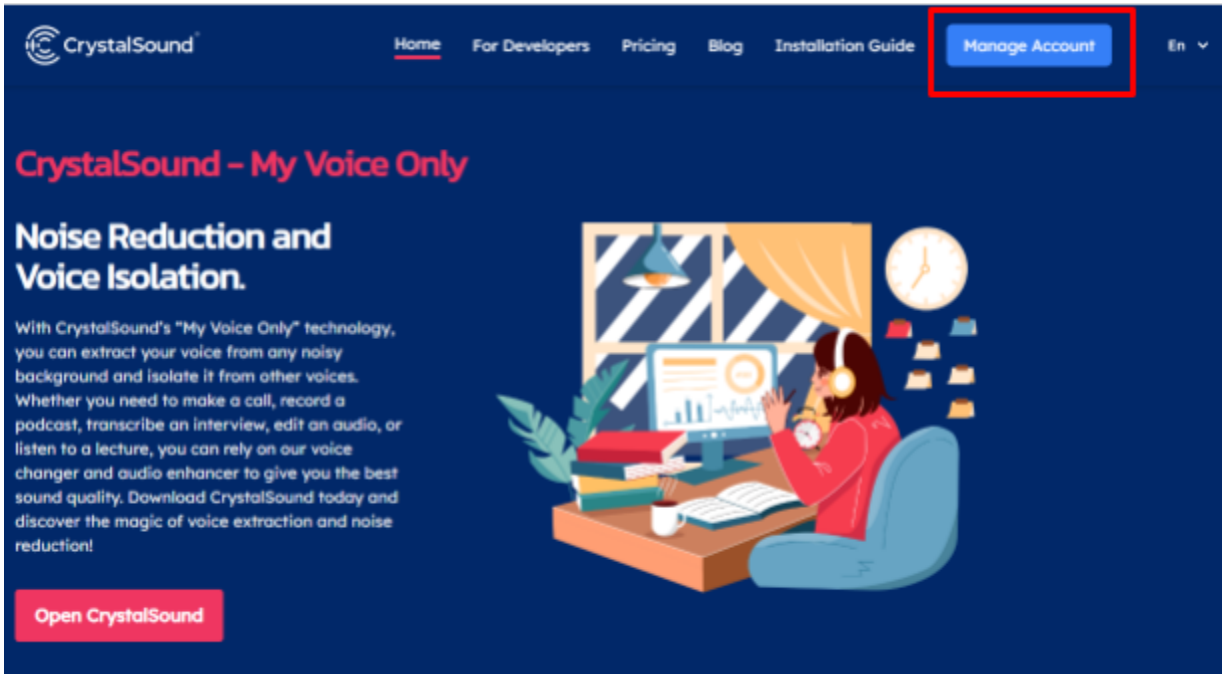
sudo apt install fuse libfuse2

These dependencies are essential to ensure that the AppImage functions correctly. Make sure you have them installed before using our AppImage.

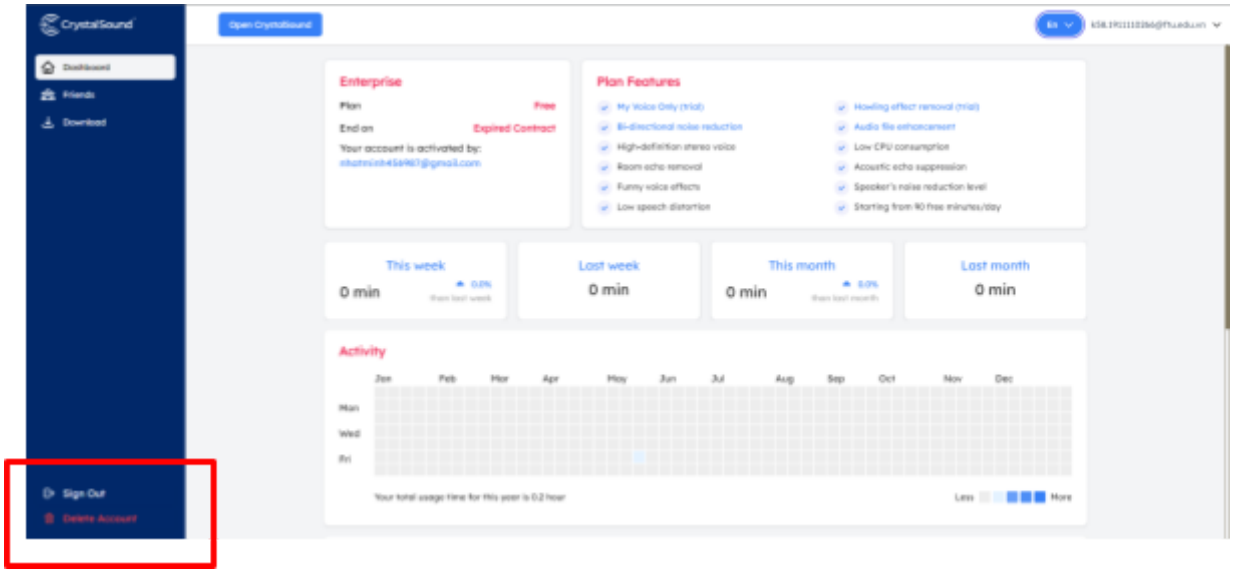
Delete Account

You have the option to delete your account if you're using a free or trial plan. To do so, please follow these steps:

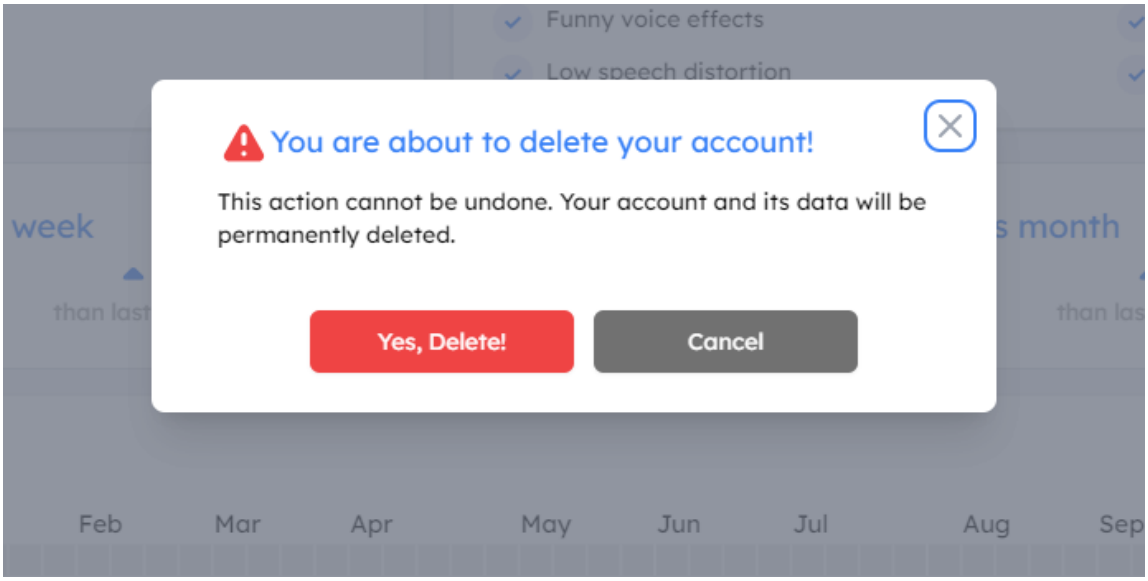
1. Go to CrystalSound website: https://crystalsound.ai/
2. Click on "Manage Account" located in the upper right corner.

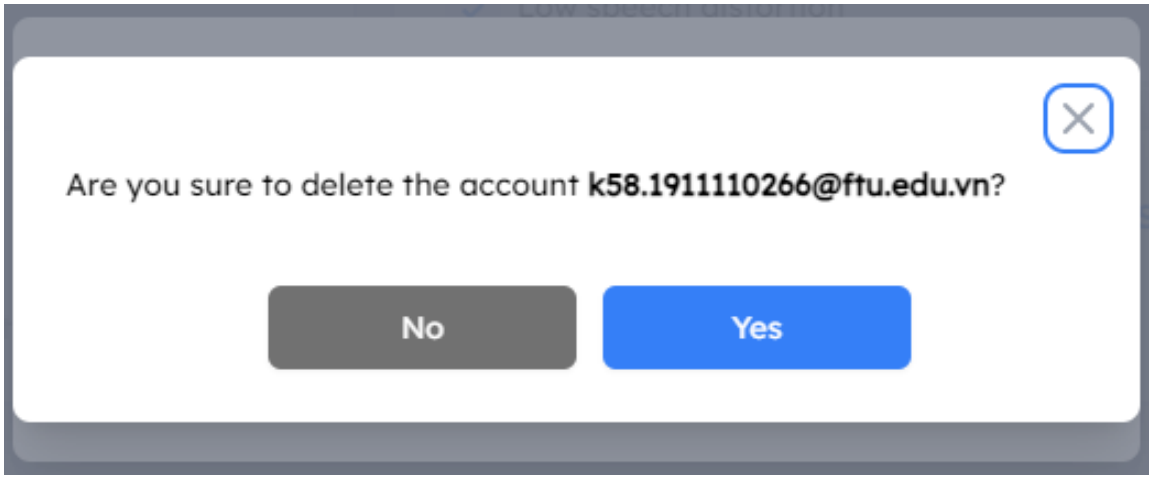


3. You will be redirected to the CrystalSound analytics dashboard. On the left side, locate and click on "Delete Account."



4. A confirmation screen will appear, asking if you want to permanently delete your account. Click "Yes."

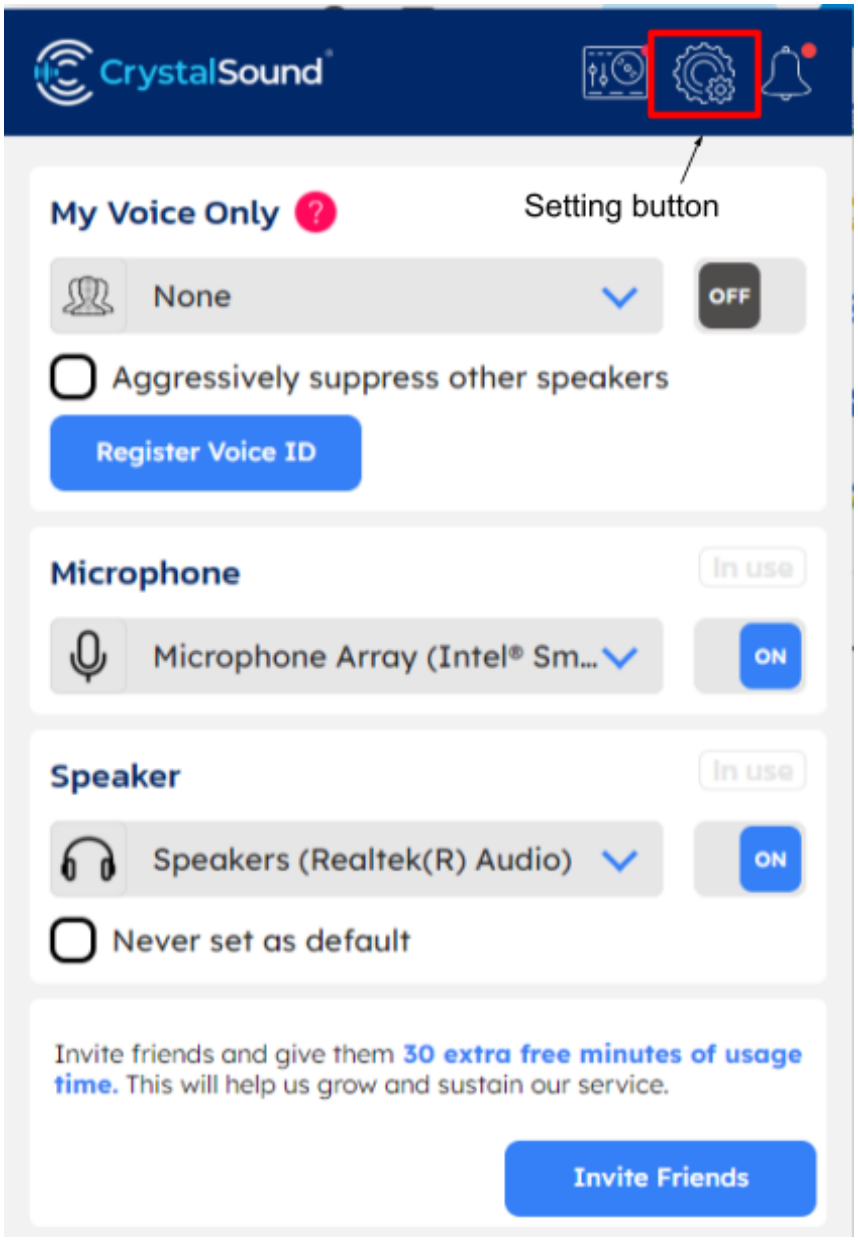


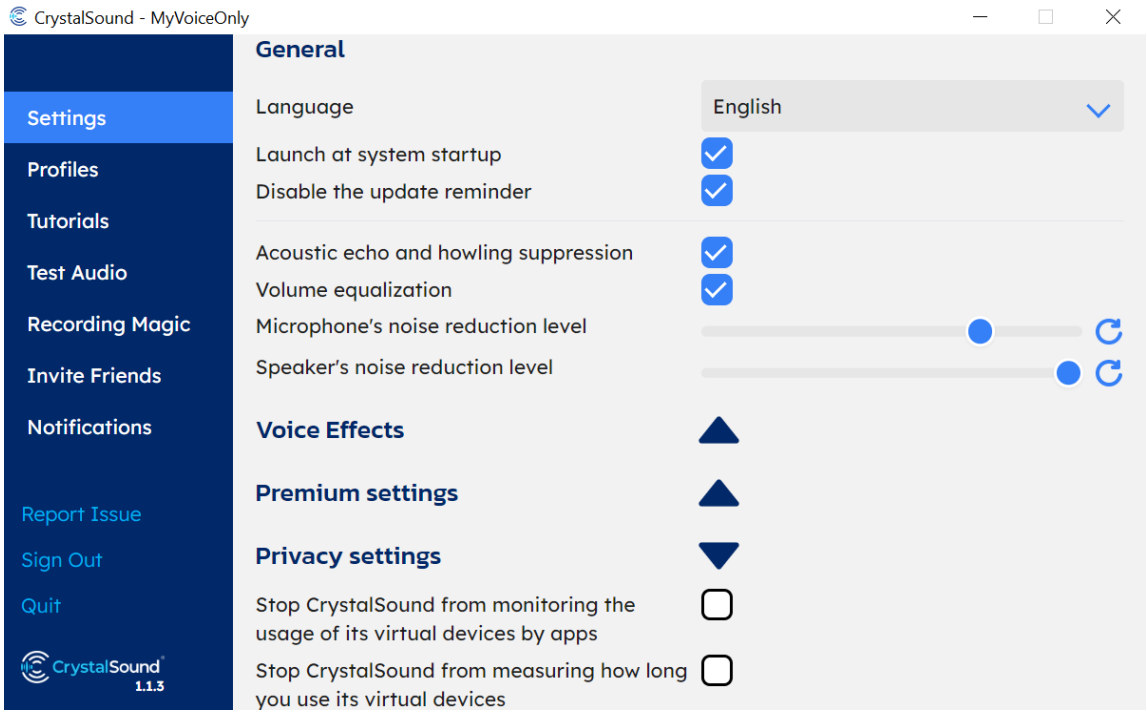


5. Your account and data will be deleted permanently. You can still sign-in again with the account that you have deleted.

Settings

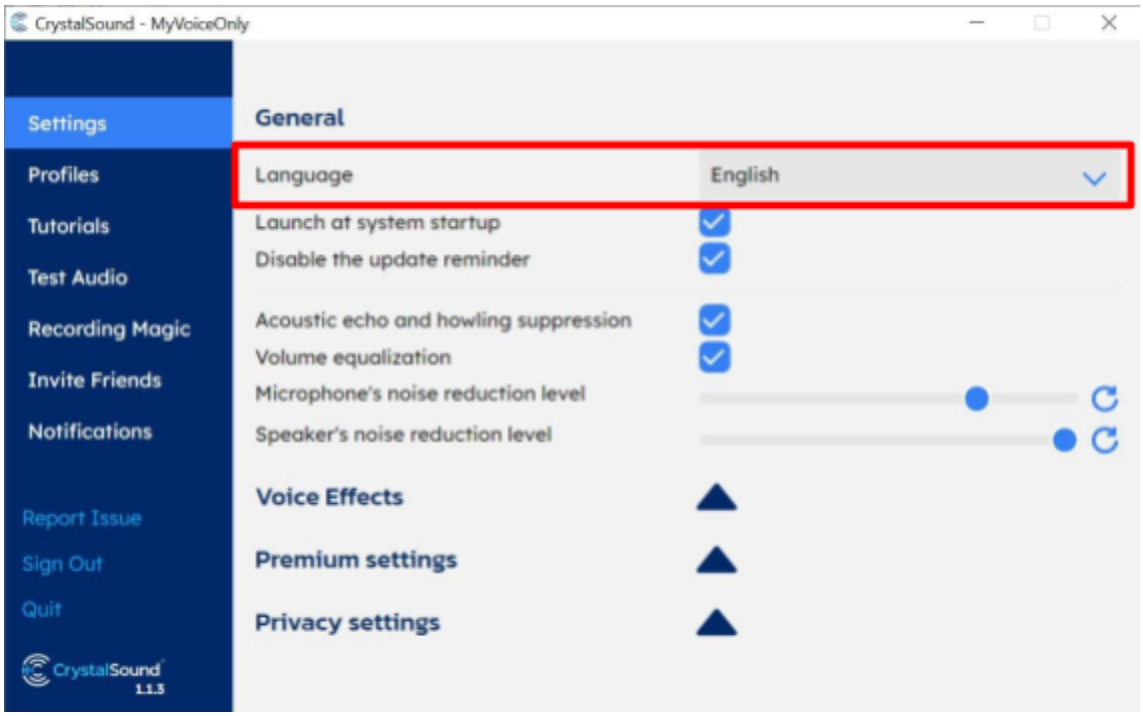
1. To access the settings screen, you follow as below:
   Step 1: Open CrystalSound on your devices.
   Step 2: Click the Setting button on the right corner.



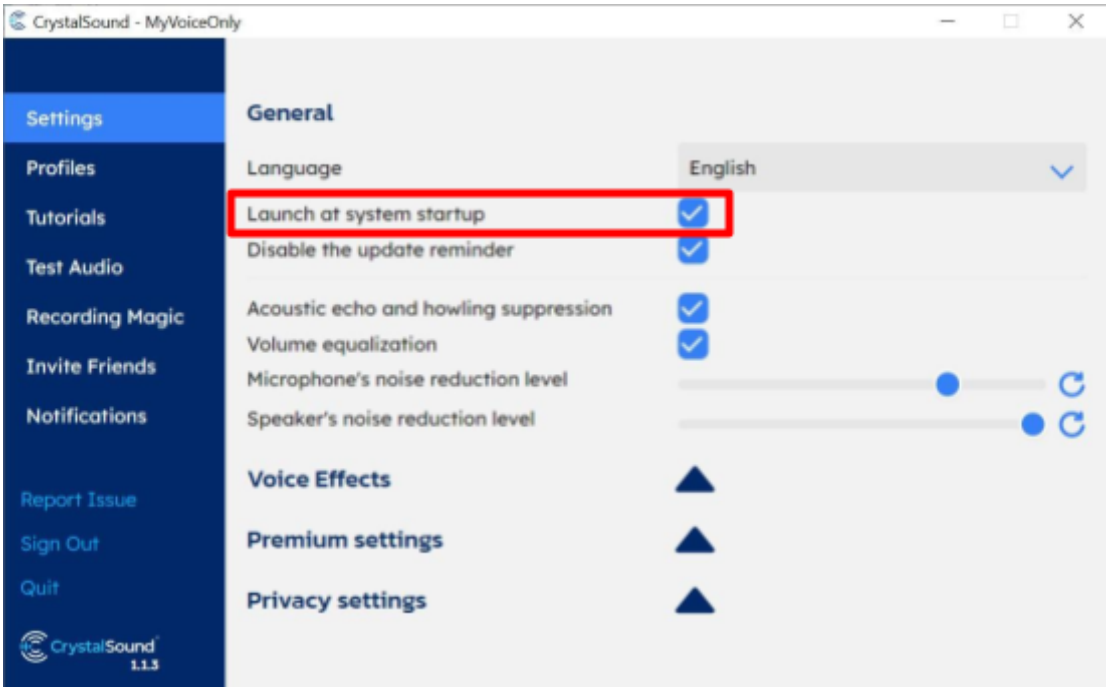


At the settings screen, you can configure CrystalSound:

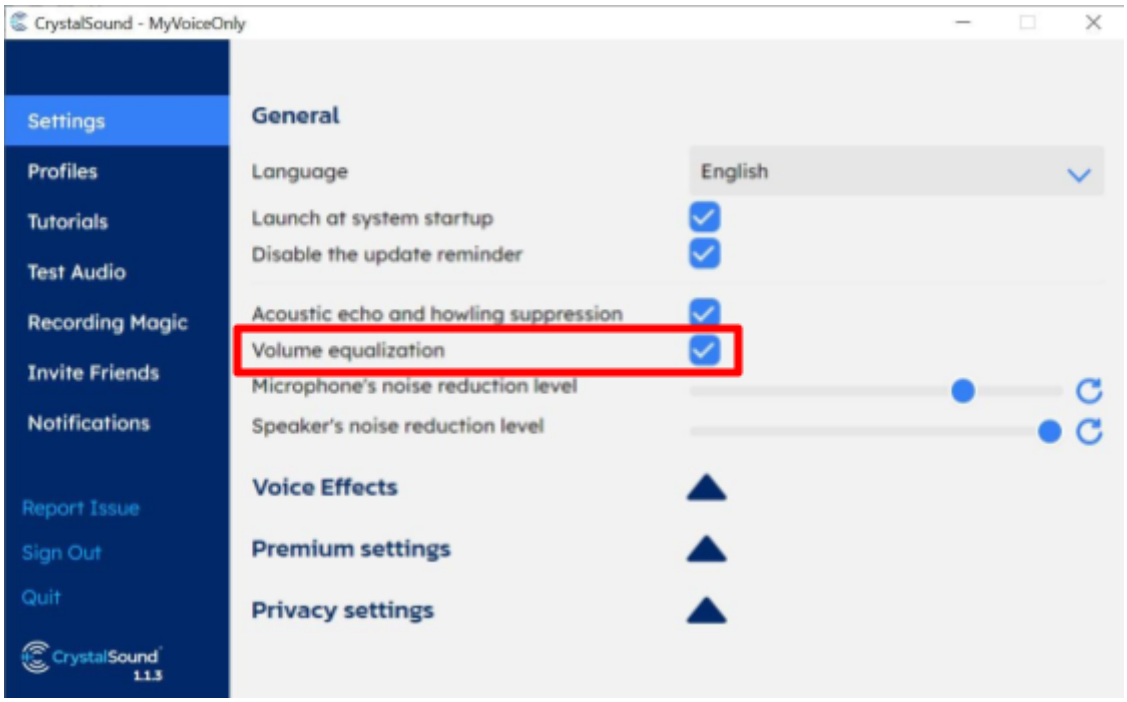
1. Language: Use this option to switch between English and Japanese.



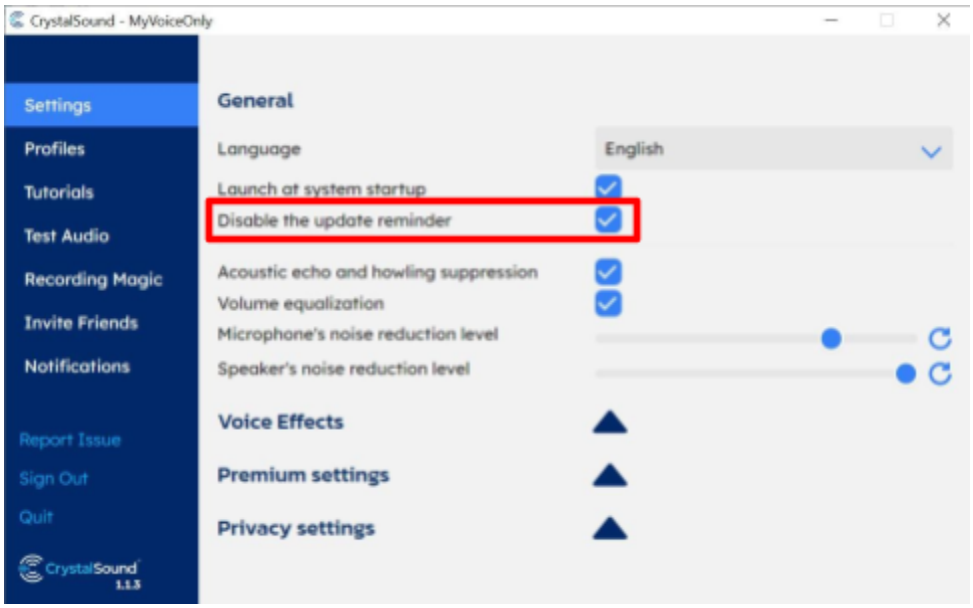
2. Launch as system startup: This option will enable CrystalSound to run automatically when you start your computer.



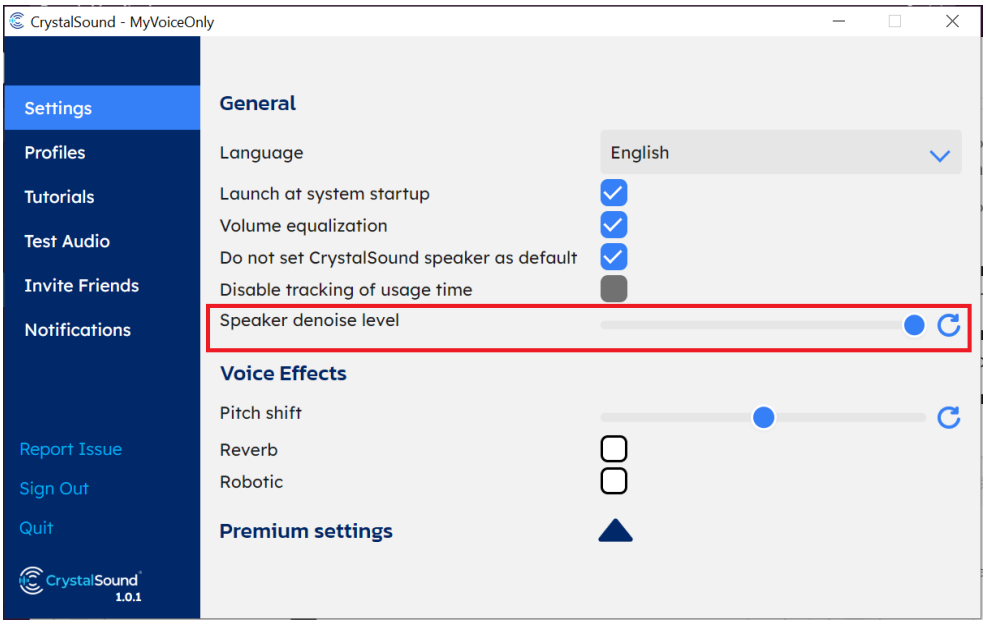
3. Volume equalization: CrystalSound optimizes your microphone's volume automatically for maximum clarity, allowing the listeners to hear you more clearly and loudly. You should always keep this option enabled.



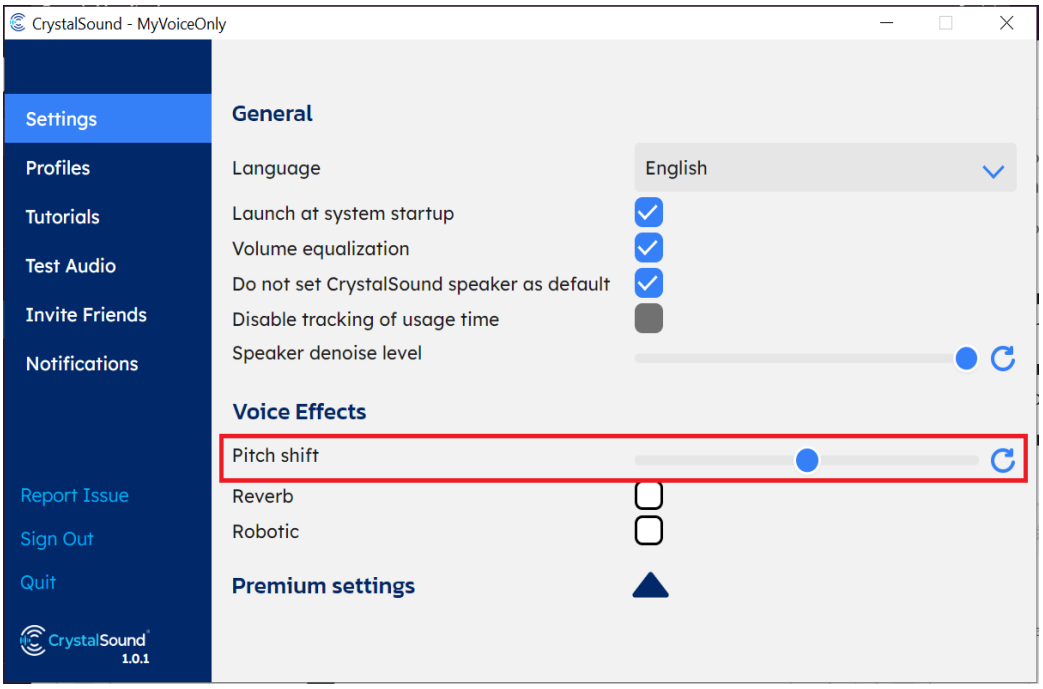
4. "Disable Update Reminder: This setting allows you to opt out of receiving update reminders. We understand the importance of providing timely updates to our users. If you prefer not to receive these reminders, you can easily disable them here. Your feedback helps us improve, and we want to respect your preferences."



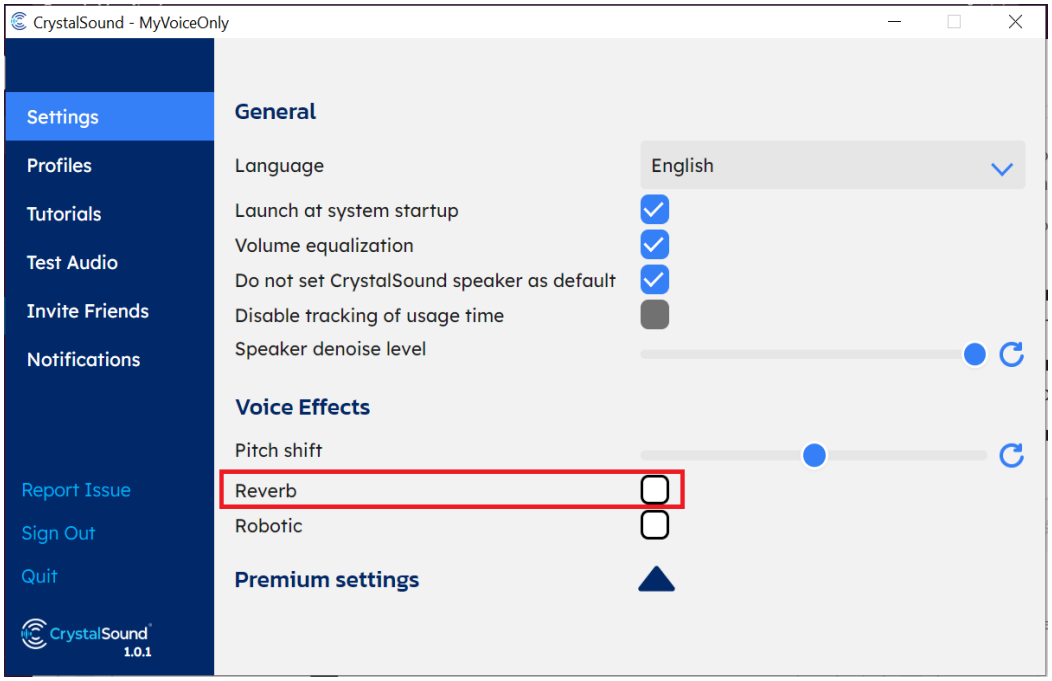
5. Speaker denoise level: Adjust the slider to control the amount of noise reduction applied to the speaker's audio. A lower denoise level will reduce distortion in speech. When "Do not set CrystalSound speakers as default" is disabled, this option can also be used to reduce background sounds such as music or ambient sounds when you are watching movies or listening to music.



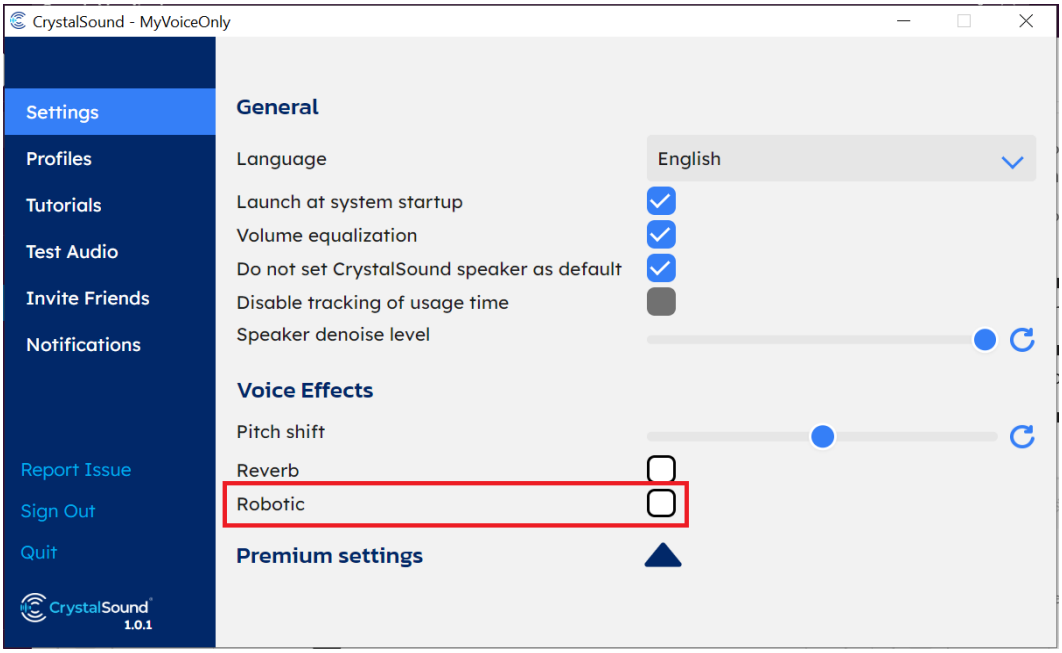
6. Pitch shift: Adjust the slider to increase or decrease the value. A negative value will make the voice deeper, while a positive one will make it brighter. This option helps you make your voice sounds manlier or more womanly depending on your reference.



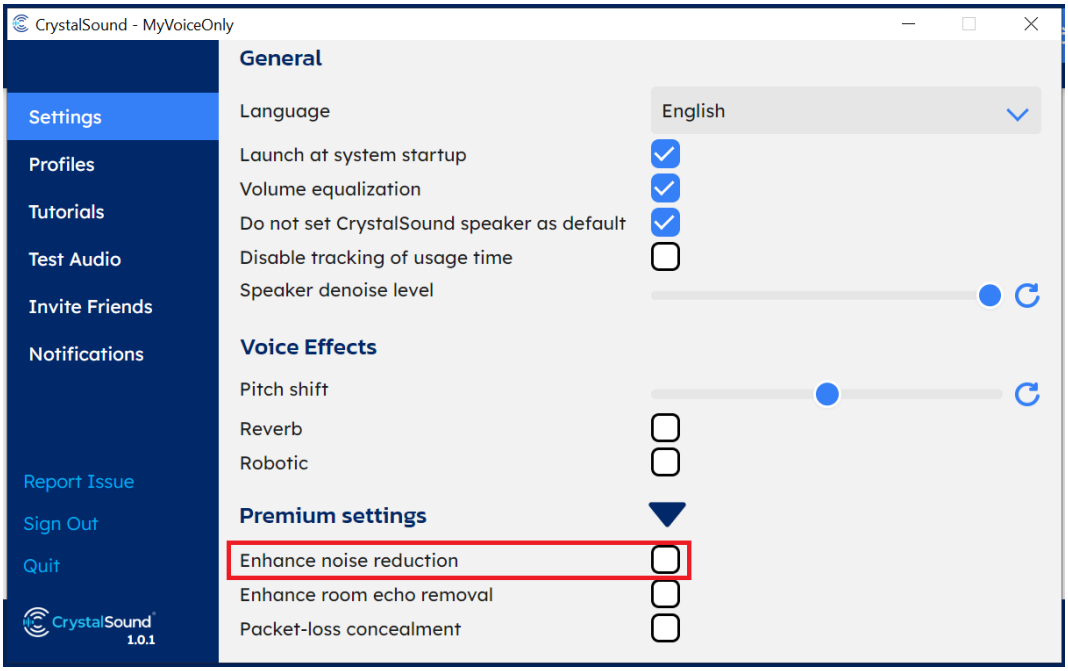
7. Reverb: Simulate reverberation effect.



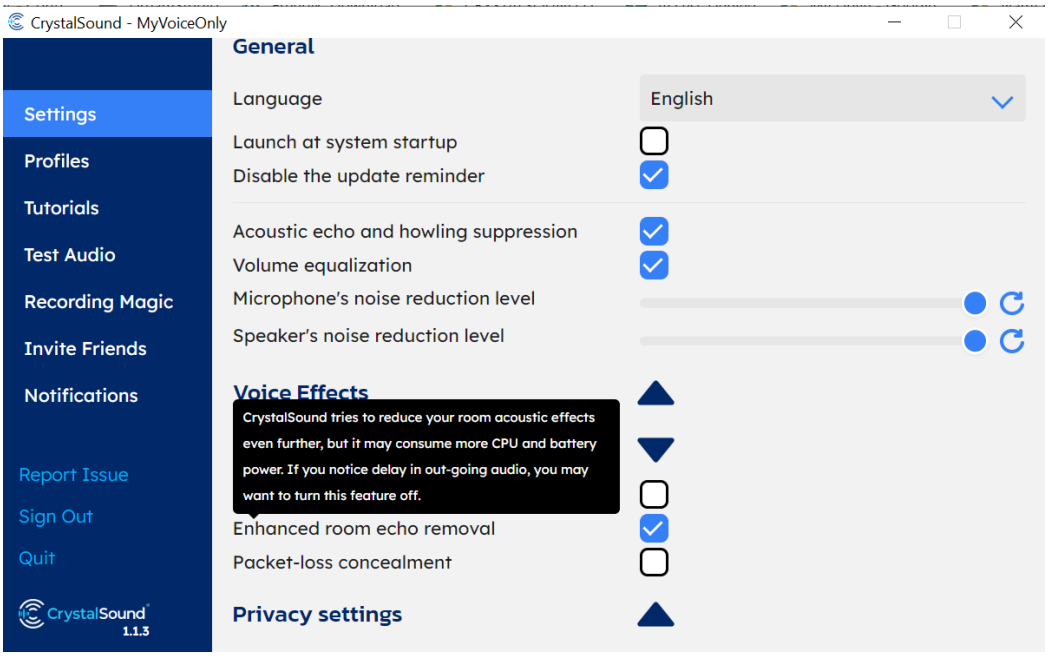
8. Robotics: Simulate robotic voice effect. This option will make you sound like a robot but it may affect your speech's clarity.



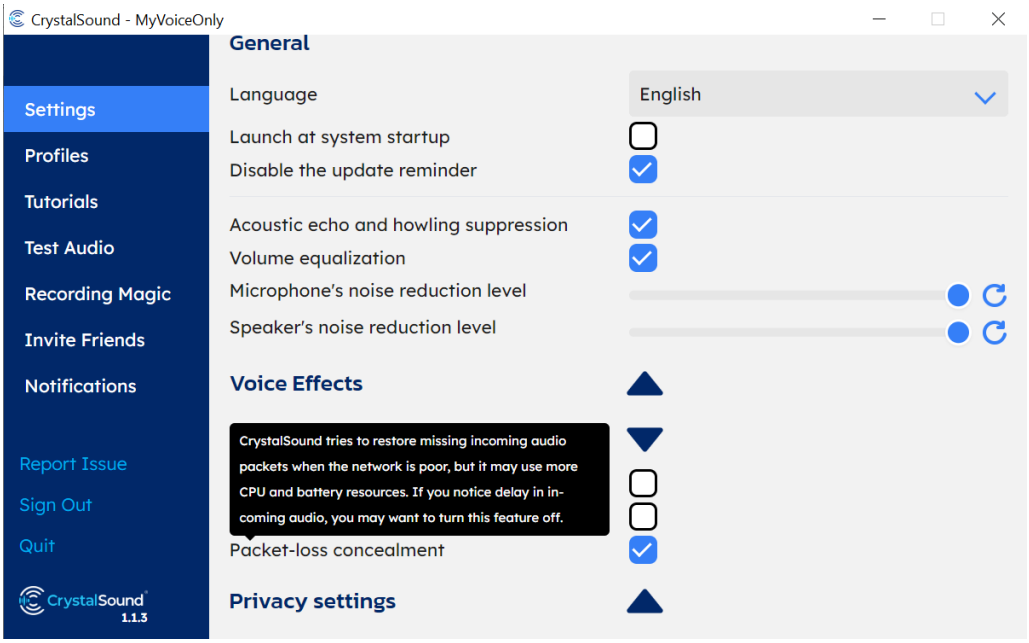
9. Enhance noise reduction: CrystalSound offers more powerful noise removal than normal, but it comes at the cost of increased CPU and battery usage. This option is useful when you can hear some residual noises or when you are in a really noisy environment.



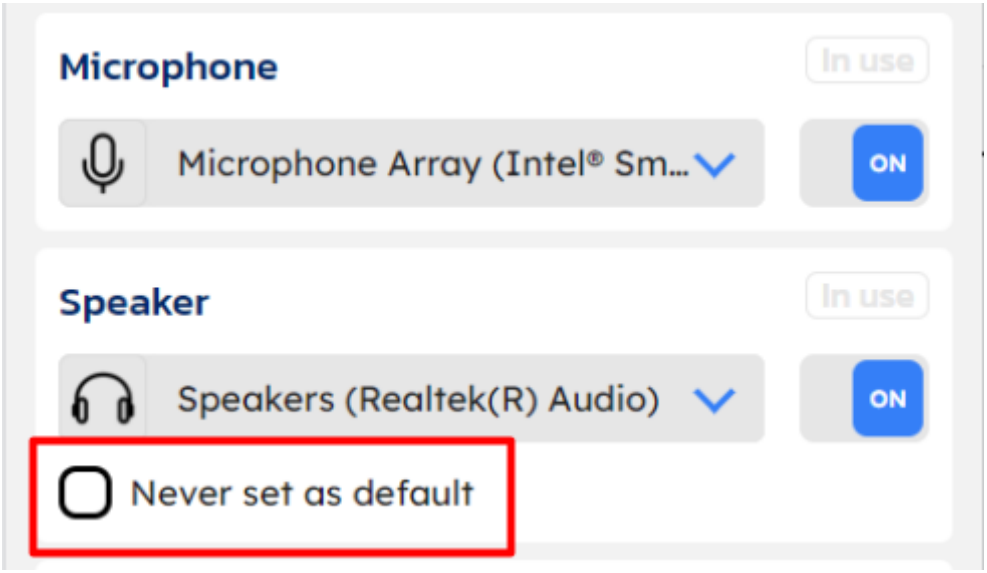
10. Room echo removal: CrystalSound reduces room acoustic effects, but it comes at a higher cost in terms of CPU and battery power. This technique is also often known as dereverberation; it helps improve your voice clarity without having an expensive recording room.



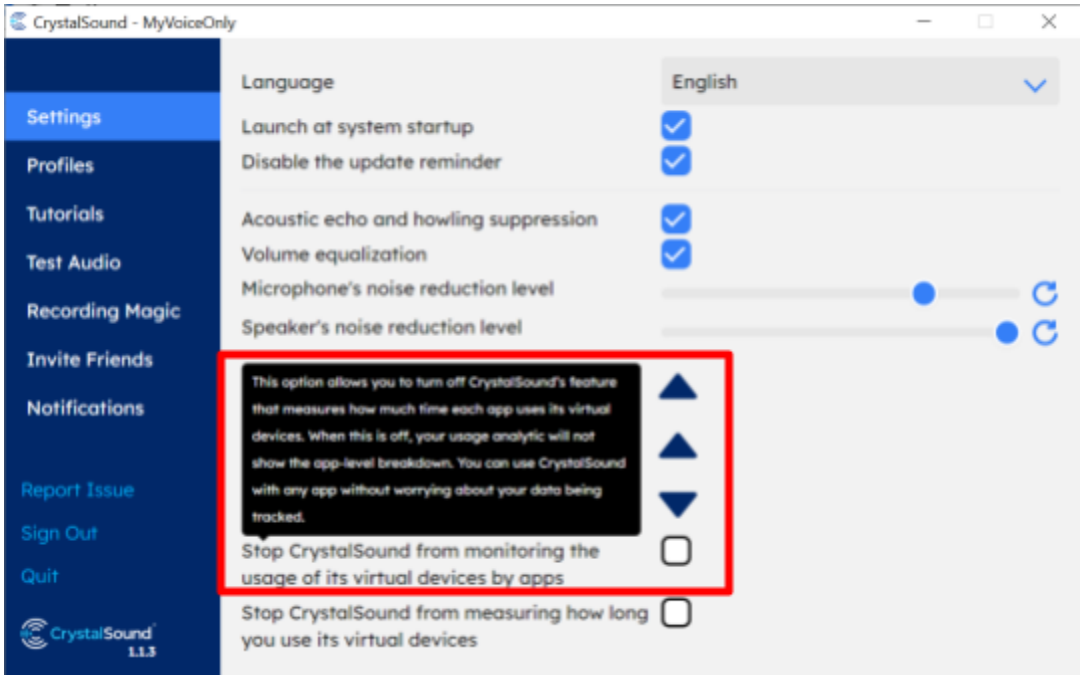
11. Packet-loss concealment: CrystalSound can recreate lost audio packets when the network is weak, but it comes at the cost of increased CPU and battery usage. This feature is particularly useful when the incoming voice is choppy.



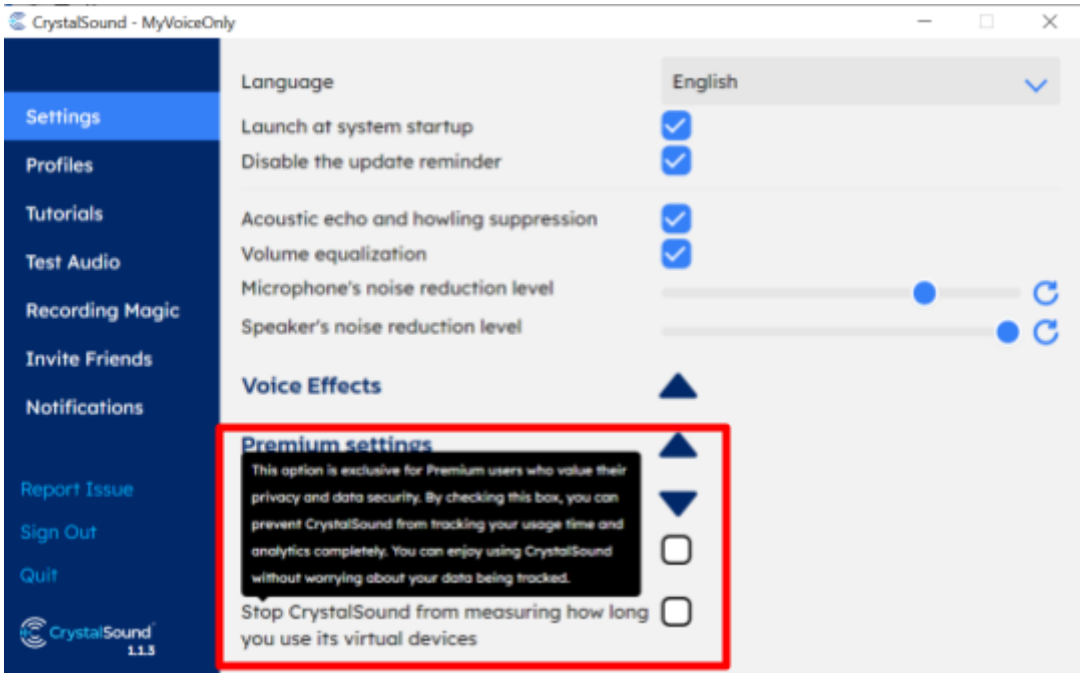
12. Do not set CrystalSound speakers as default: This option is available on Windows only. Enabling this setting will prevent CrystalSound speakers from being used as the default device, as it may inadvertently filter out sound while watching movies or listening to music. If you want to use CrystalSound Speaker to filter out non-speech sounds when listening to YouTube or PodCast, you may want to uncheck this option.



13. Stop CrystalSound from monitoring the usage of its virtual devices by app: This option allows you to prevent CrystalSound from monitoring the usage of its virtual devices on an app-specific basis. While usage tracking is necessary for free users, we respect your privacy as a paid subscriber. Feel free to disable this tracking if you value your privacy and are a paid user."



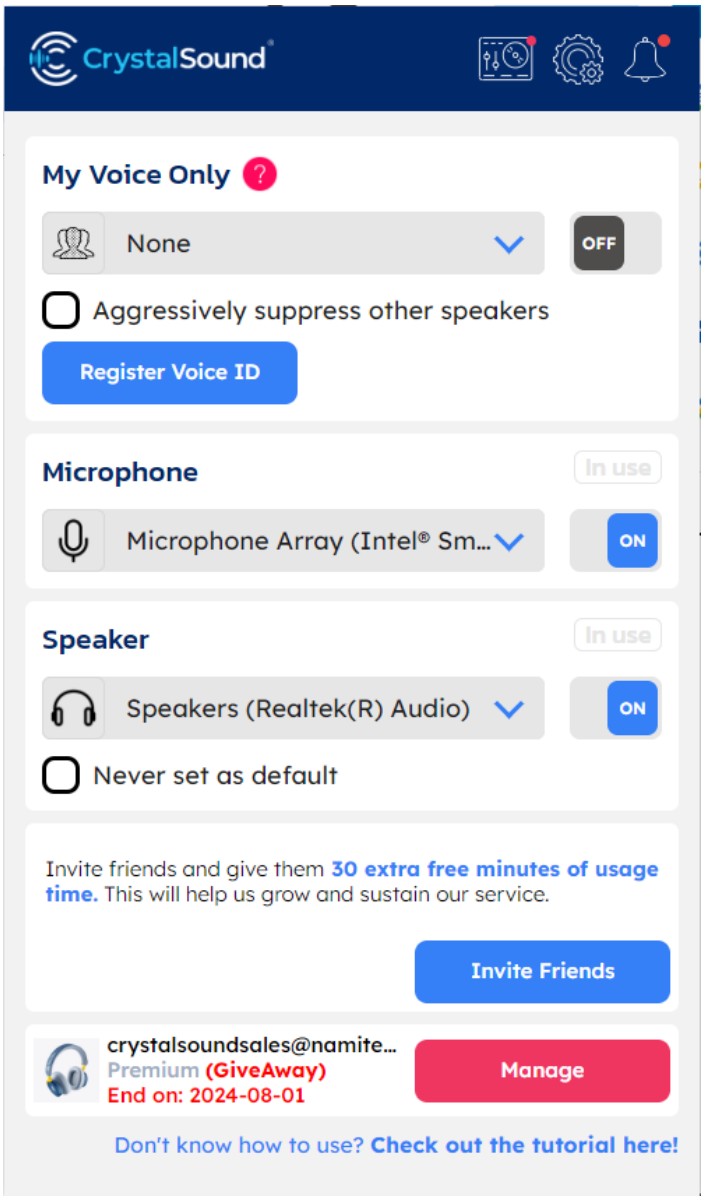
14. Stop CrystalSound from measuring how long you use its virtual devices: This option can be enabled to stop the tracking of user usage time. We need to count your usage time if you are a free user. However, if you are a paid user and you care about your privacy, you can disable usage tracking here.



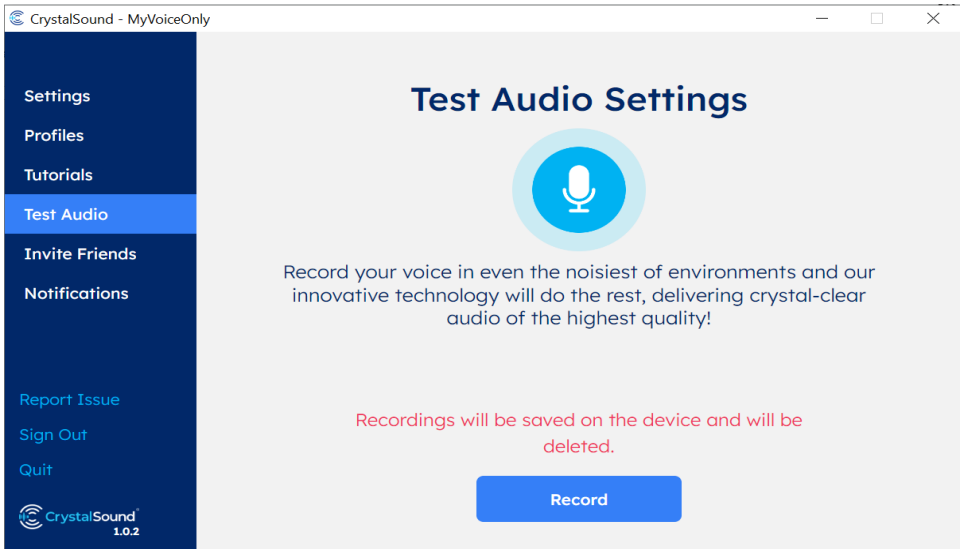
Test audio setting

To test how CrystalSound removes background noise, use our Test Audio feature. Record a short audio clip with typical background noises in your environment, listen to the noise-canceled result, and see how CrystalSound performs.

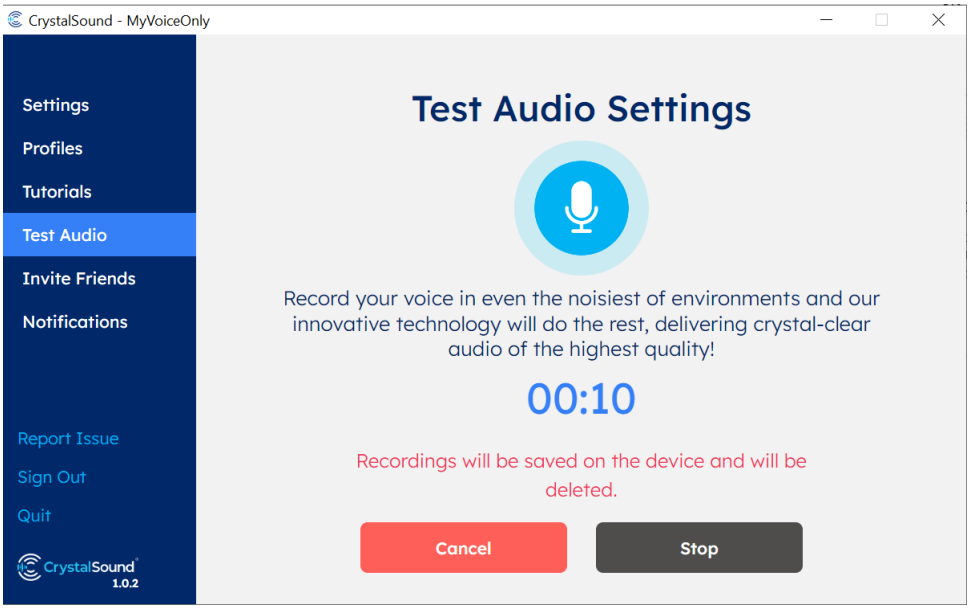
1. Launching CrystalSound.



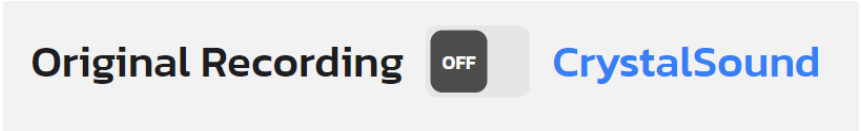
2. Click on the Setting button on the right corner.
3. Choose Test Audio.

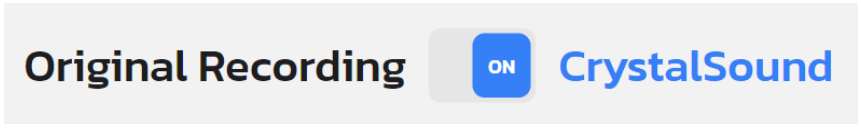


4. Start your recording. For better comparison, record 10-15s of talking in a noisy environment.



5. First, listen to your original recording. Then, turn on CrystalSound to listen to the noise-canceled version.

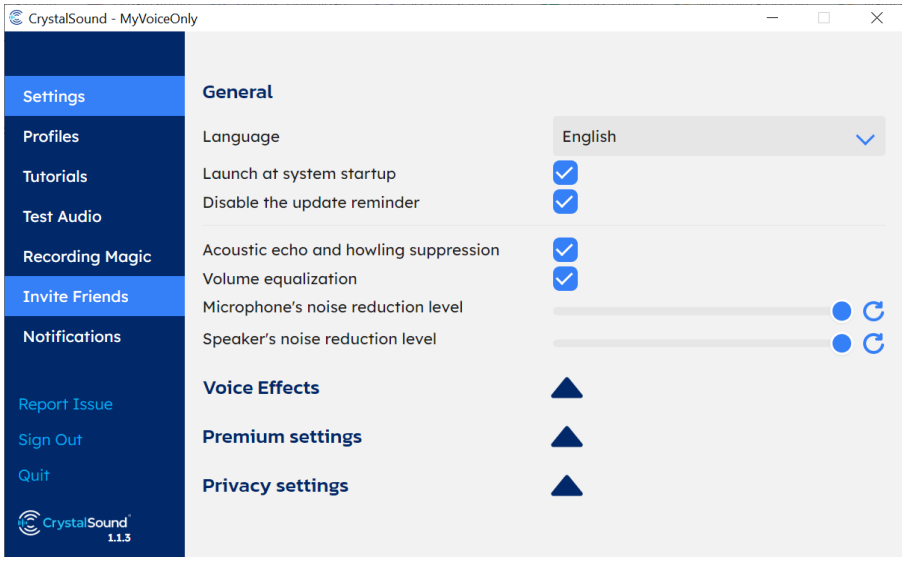




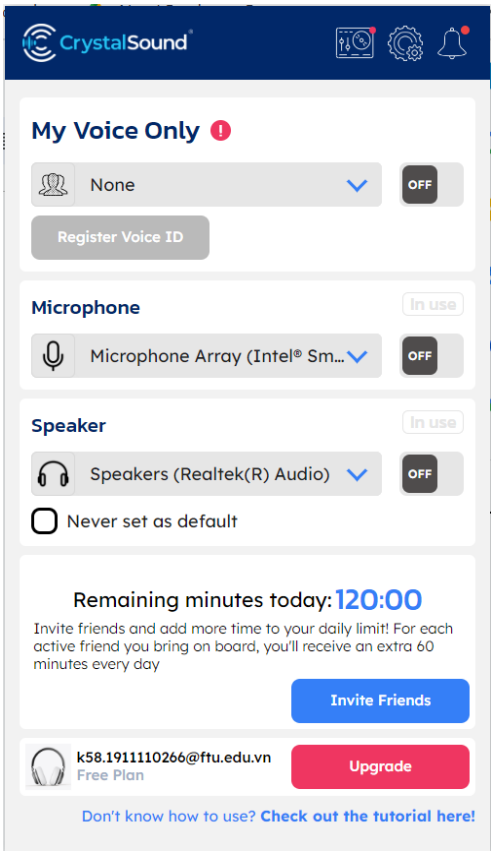
Invite friend to use CrystalSound

You can share and invite friends to use CrystalSound by following these steps.:

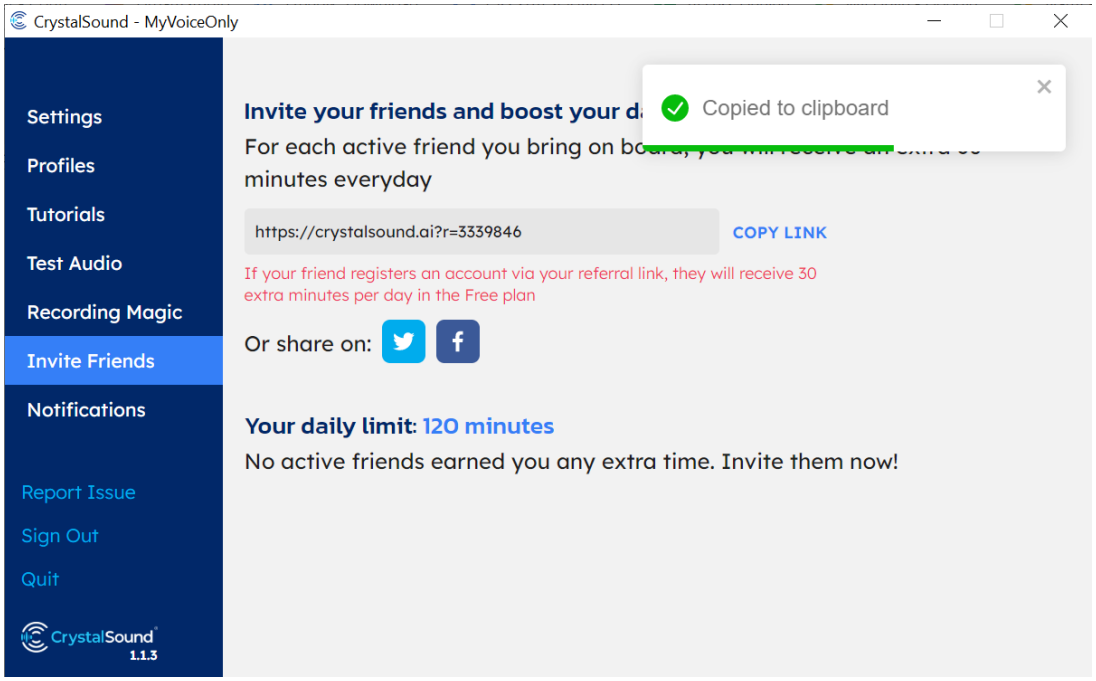
1. Launch **CrystalSound.**
2. Open Invite Friend form:
   a. For Premium accounts: Click **Setting** button then choose **Invite Friend.**



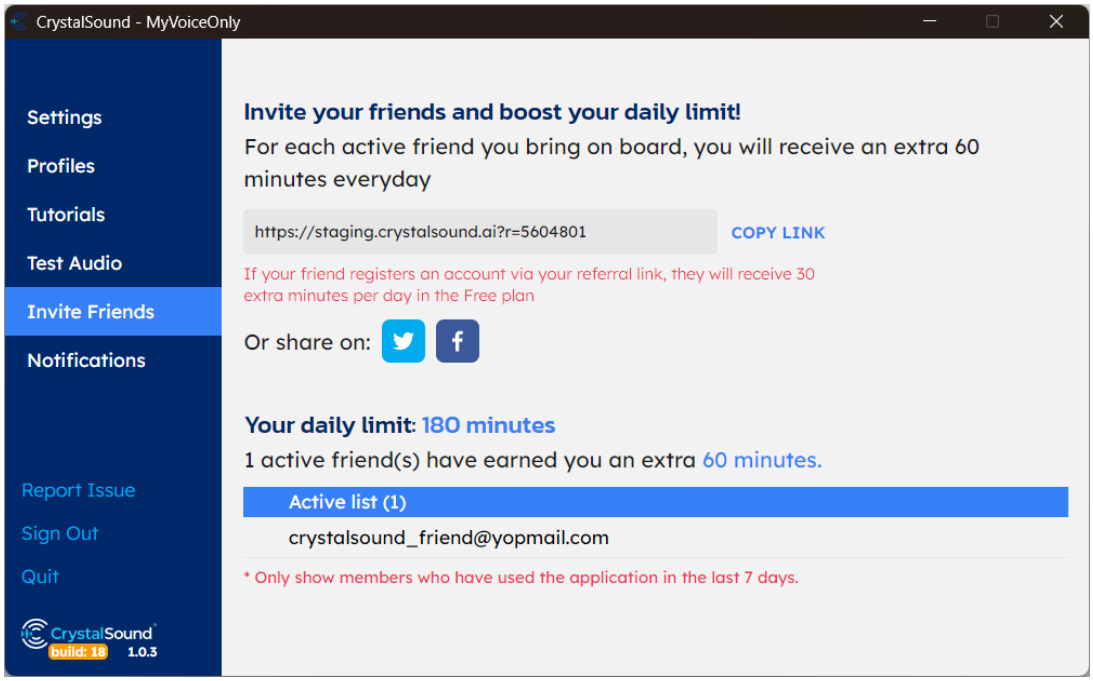
   b. For Free accounts: Click **Invite Friend** in CrystalSound Main Screen.



3. Copy the link and share it wherever you like, or simply click on the Twitter or Facebook icons to share the invite link with your friends and community.

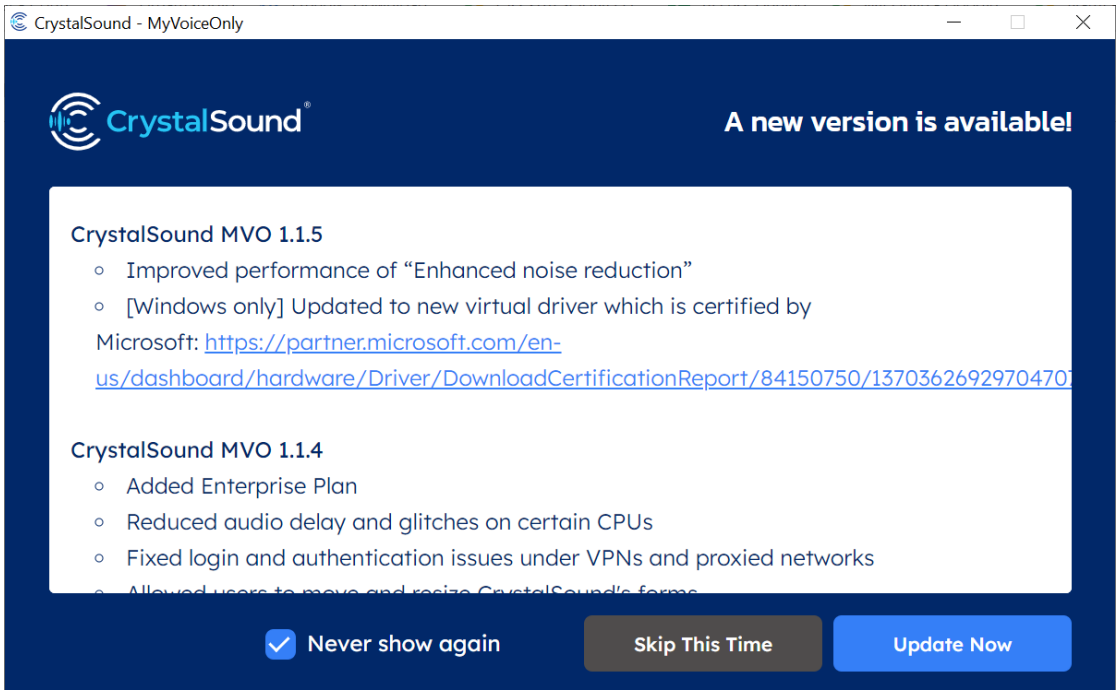


4. If you have a free account and your friends use your shared link to sign up for a new account, **you will receive an extra 60 minutes** to use the app's limited features. You can view your friend list and their information in the app or on the web.

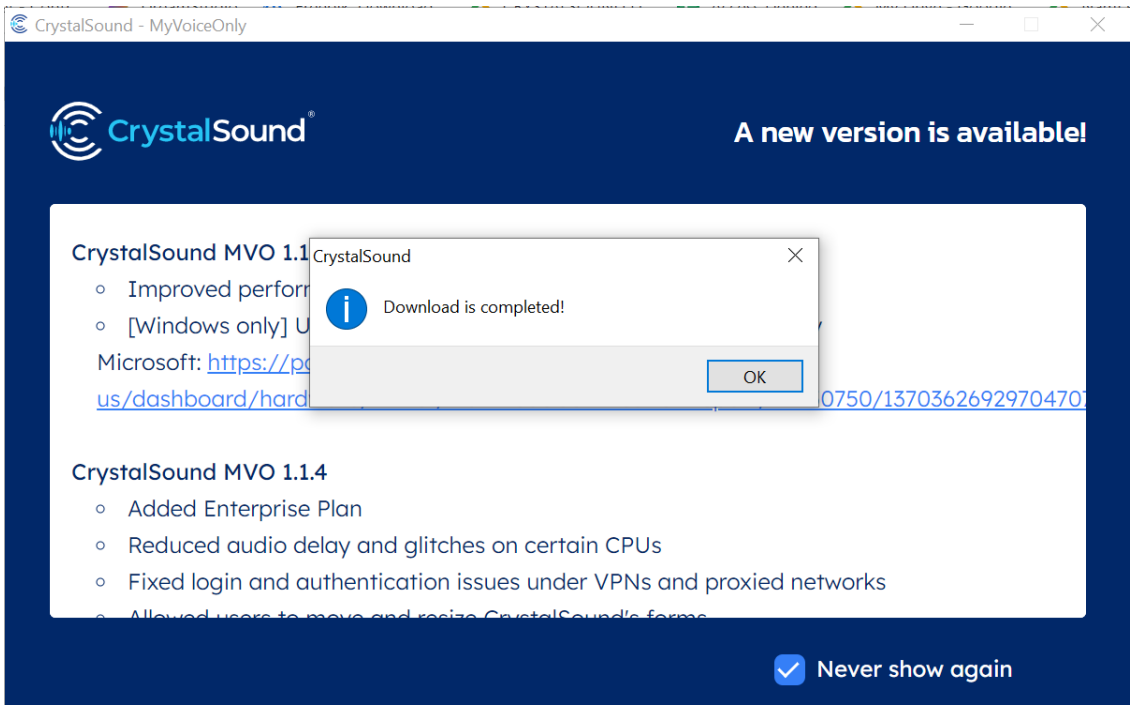


Update CrystalSound app

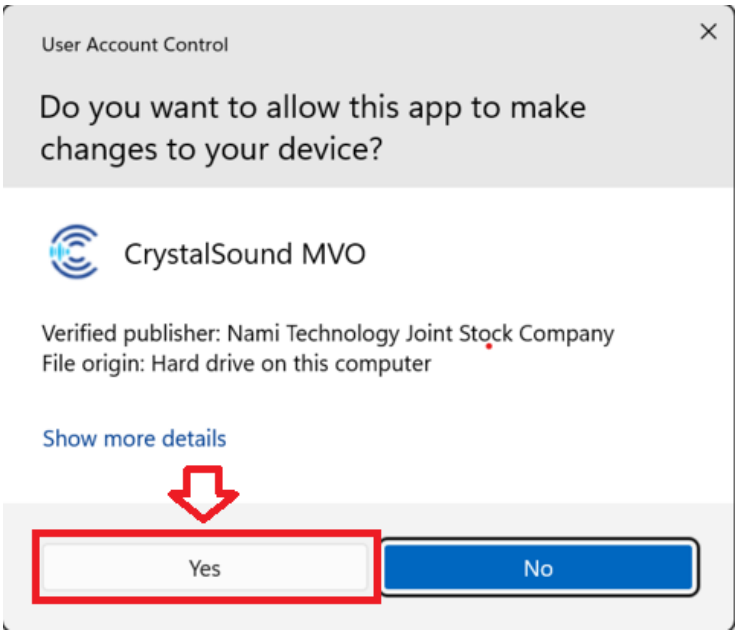
CrystalSound will automatically notify you when a new update is available. At the system startup, the screen below will appear.



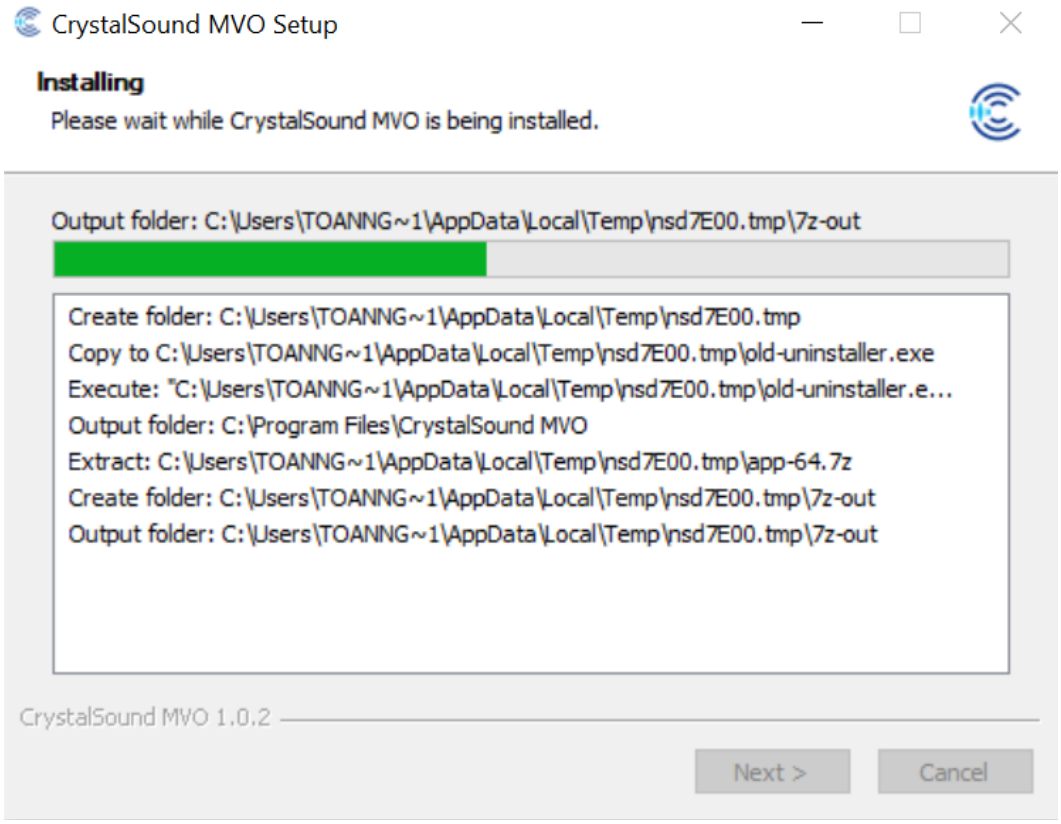
To update the new version, press **Update Now** once and the new version will be downloaded.

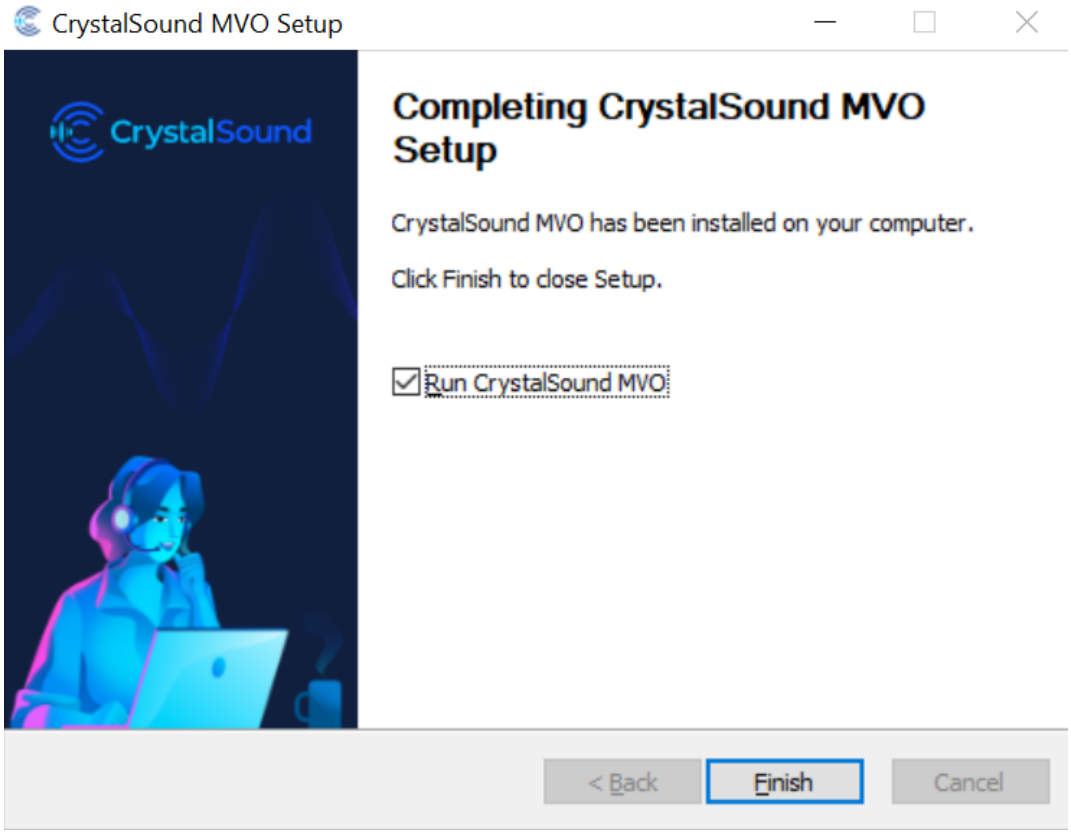


After the update is downloaded successfully, you don’t need to press Update Now again. Wait a moment and a window will appear to ask for permission to install the new version.



Click the Yes button and the install process will start automatically.

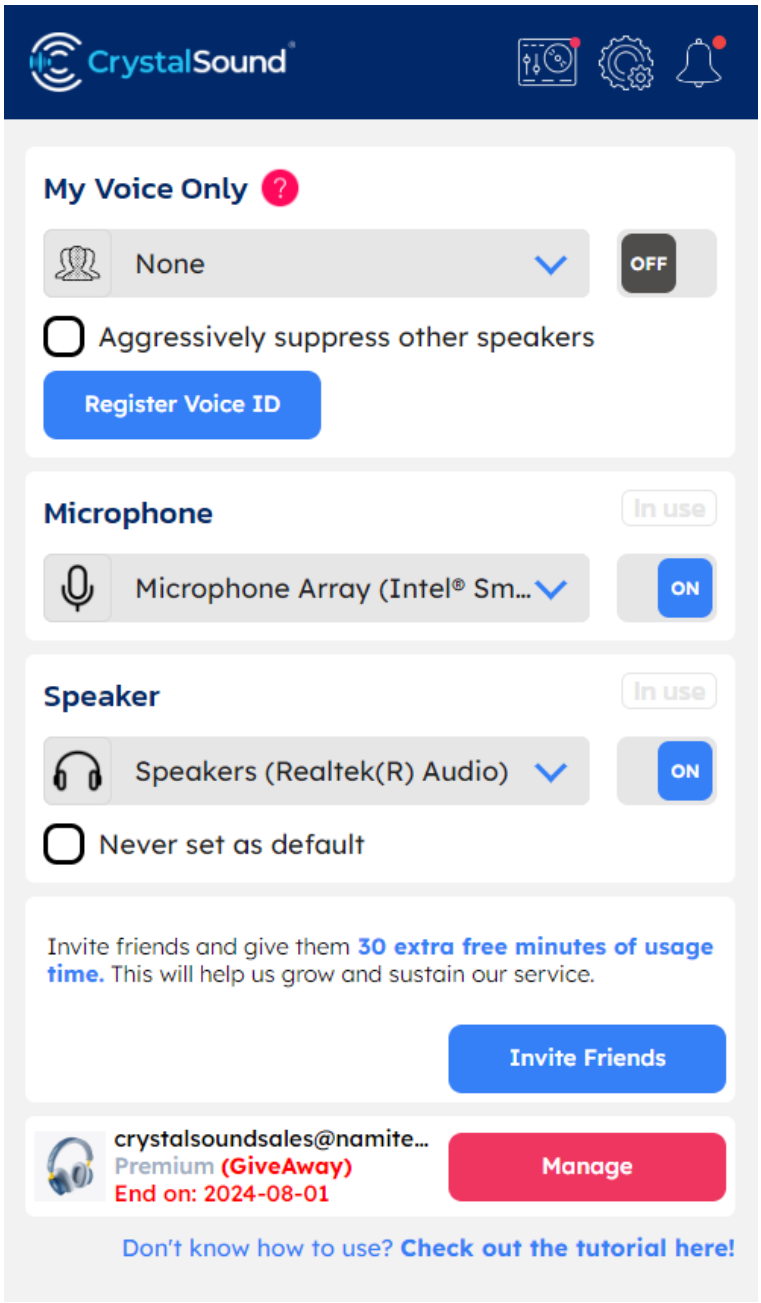

CrystalSound MVO Setup
Installing
Please wait while CrystalSound MVO is being installed.
Output folder: C:\Users\TOANNG~1\AppData\Local\Temp\nsd7E00.tmp\7z-out
Create folder: C:\Users\TOANNG~1\AppData\Local\Temp\nsd7E00.tmp
Copy to C:\Users\TOANNG~1\AppData\Local\Temp\nsd7E00.tmp\old-uninstaller.exe
Execute: "C:\Users\TOANNG~1\AppData\Local\Temp\nsd7E00.tmp\old-uninstaller.e...
Output folder: C:\Program Files\CrystalSound MVO
Extract: C:\Users\TOANNG~1\AppData\Local\Temp\nsd7E00.tmp\app-64.7z
Create folder: C:\Users\TOANNG~1\AppData\Local\Temp\nsd7E00.tmp\7z-out
Output folder: C:\Users\TOANNG~1\AppData\Local\Temp\nsd7E00.tmp\7z-out
CrystalSound MVO 1.0.2
Next >
Cancel


CrystalSound MVO Setup
CrystalSound
Completing CrystalSound MVO Setup
CrystalSound MVO has been installed on your computer.
Click Finish to close Setup.
Run CrystalSound MVO
< Back
Finish
Cancel

Noise reduction level

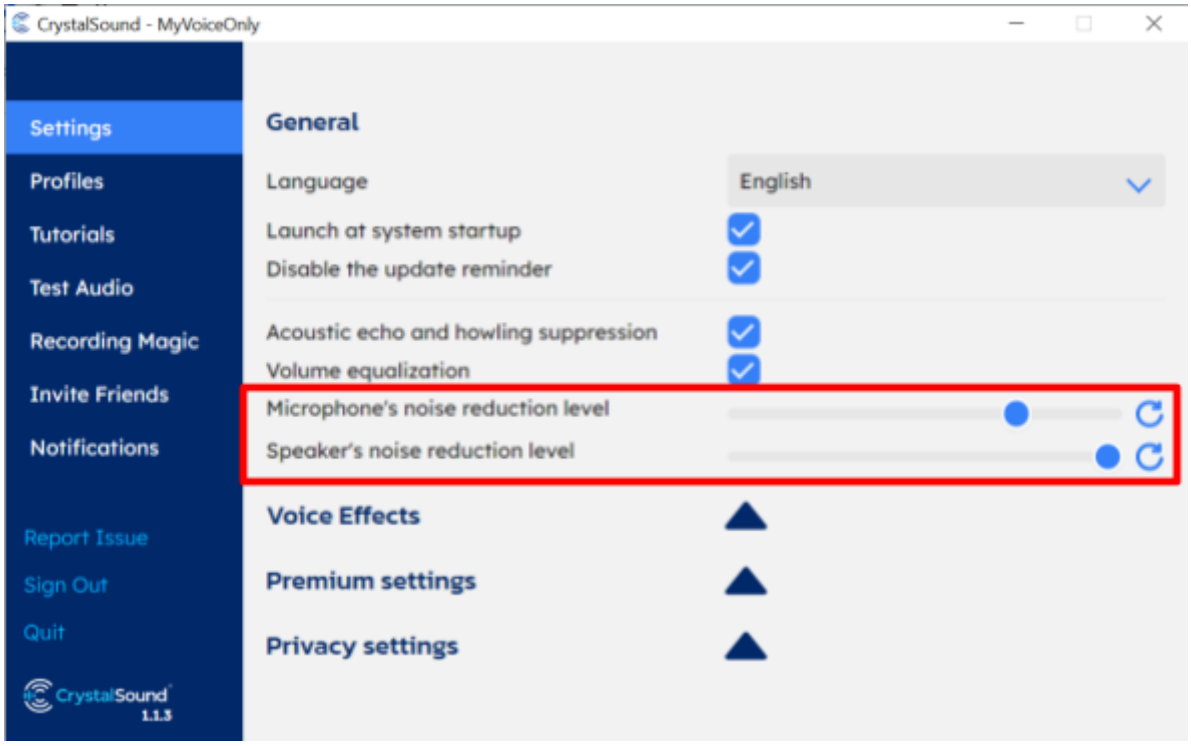
The Noise Reduction Level feature allows users to adjust the amount of noise reduction applied to a speaker's audio, providing convenience in specific situations for users.
You can use this setting by following these steps.:

1. Launch CrystalSound.

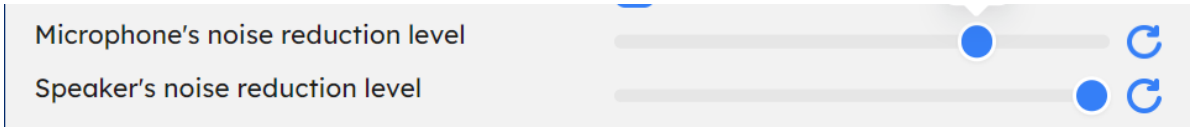


2. Click on the Setting button on the right corner.

3. In the general settings, you can see the Noise Reduction Level slider.



4. You can slide the bar to adjust the reduction level of the Microphone and Speaker.



Features

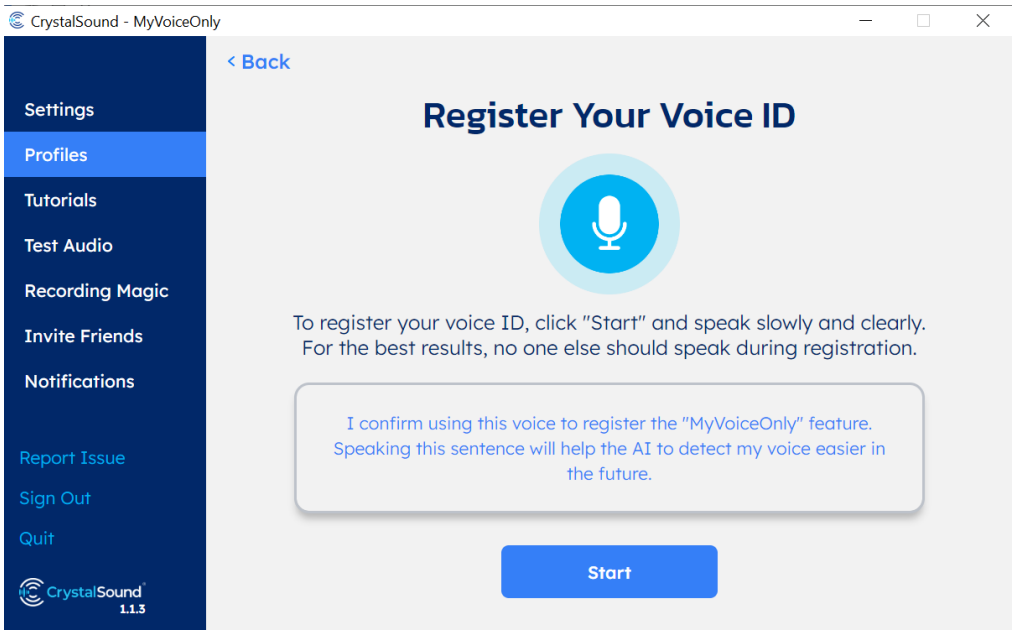
My Voice Only function to suppress other people's voices

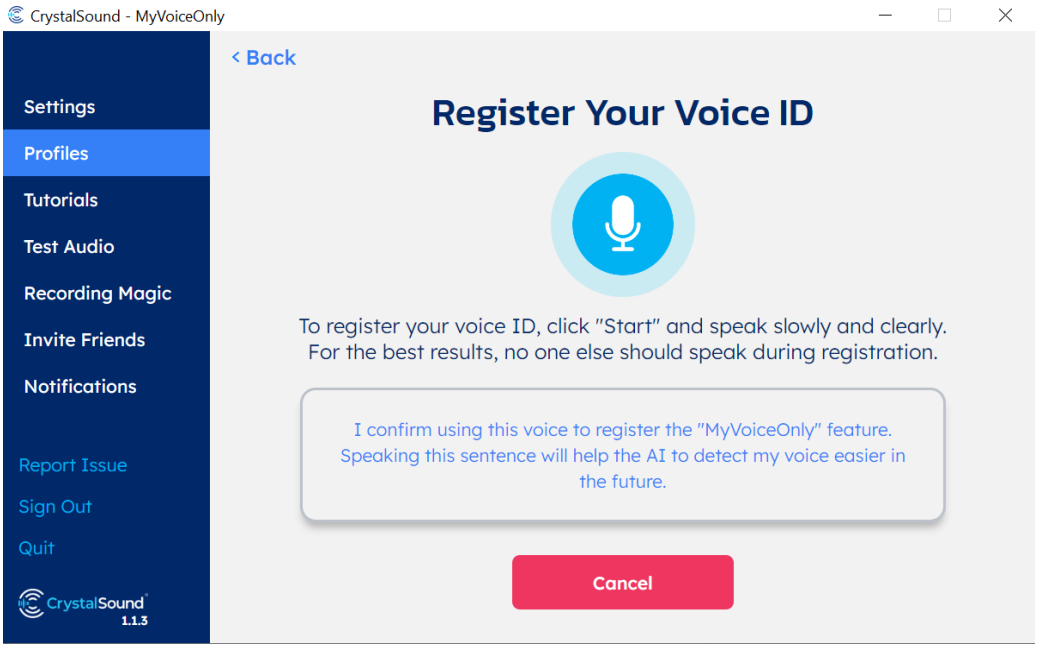
"My Voice Only" - the revolutionary feature of CrystalSound that lets you cut through the noise and be heard loud and clear in any call or online meeting. Whether you're in a noisy environment, working from home, or simply want to keep your conversations private, "My Voice Only" gives you the power to control what others hear.

To be more specific, once you have registered your voice ID on CrystalSound, enabling the My Voice Only feature will cause CrystalSound to filter out all other voices except for yours, even if multiple people are speaking simultaneously in call, recording, online meeting, etc.

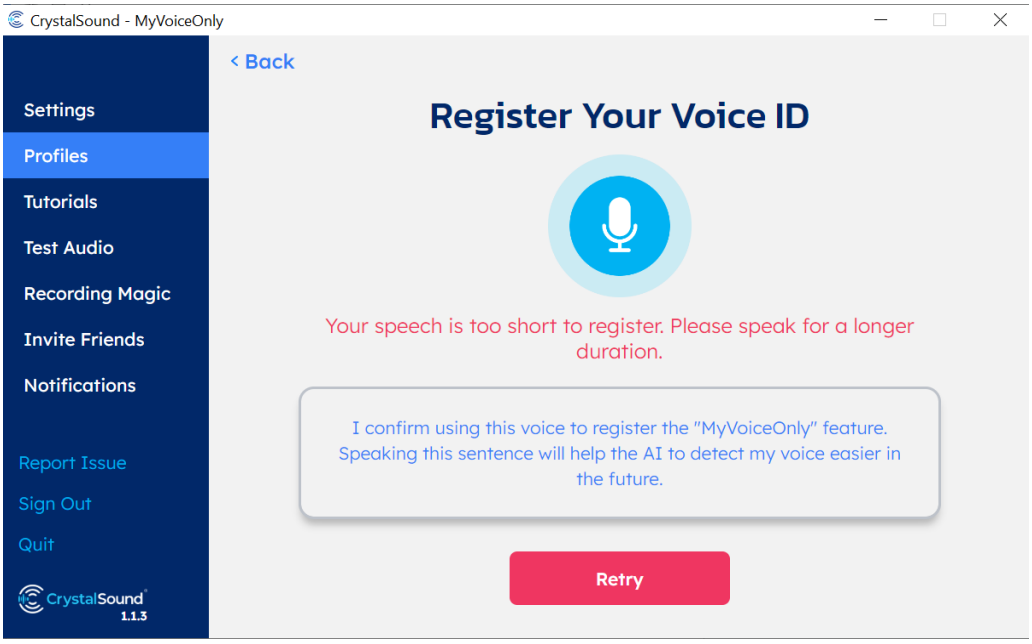
Register your voice to use the My Voice Only feature

1. Register your voice by clicking on Register Profile.
2. To ensure the best results, please follow these instructions carefully: click on the start button and speak clearly and loudly. We recommend finding a quiet place and ensuring that no one else speaks during registration.

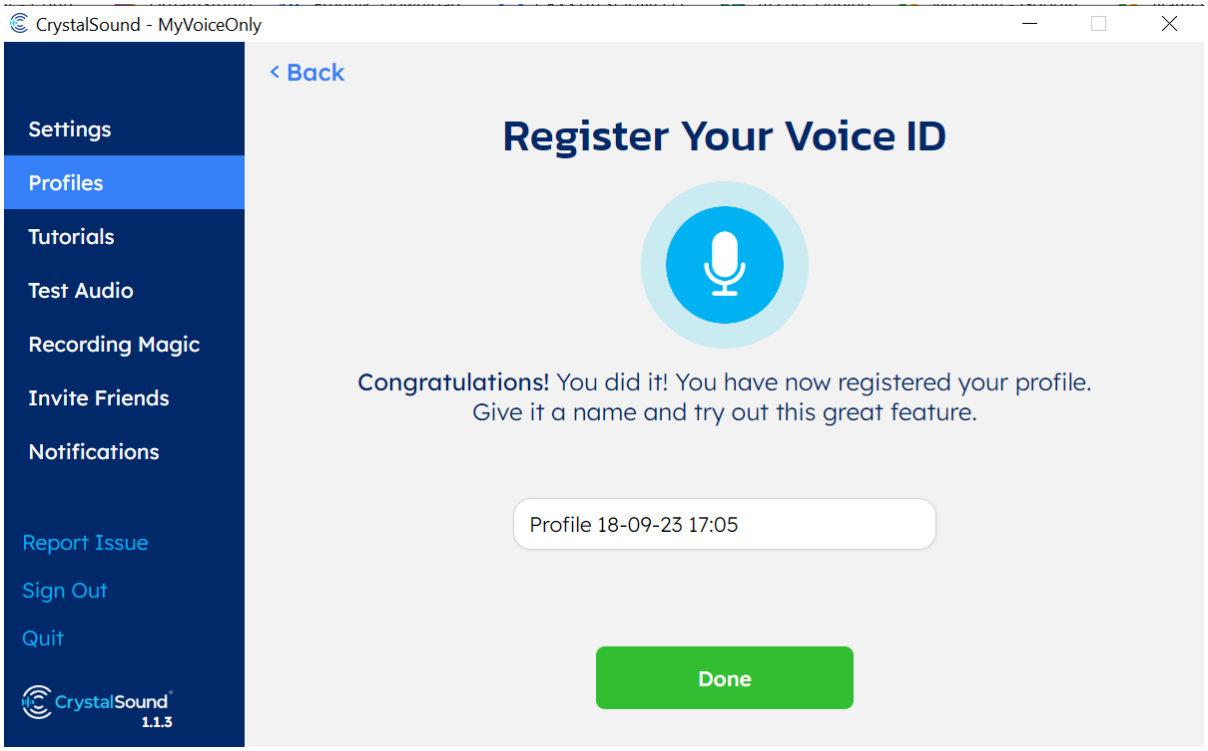




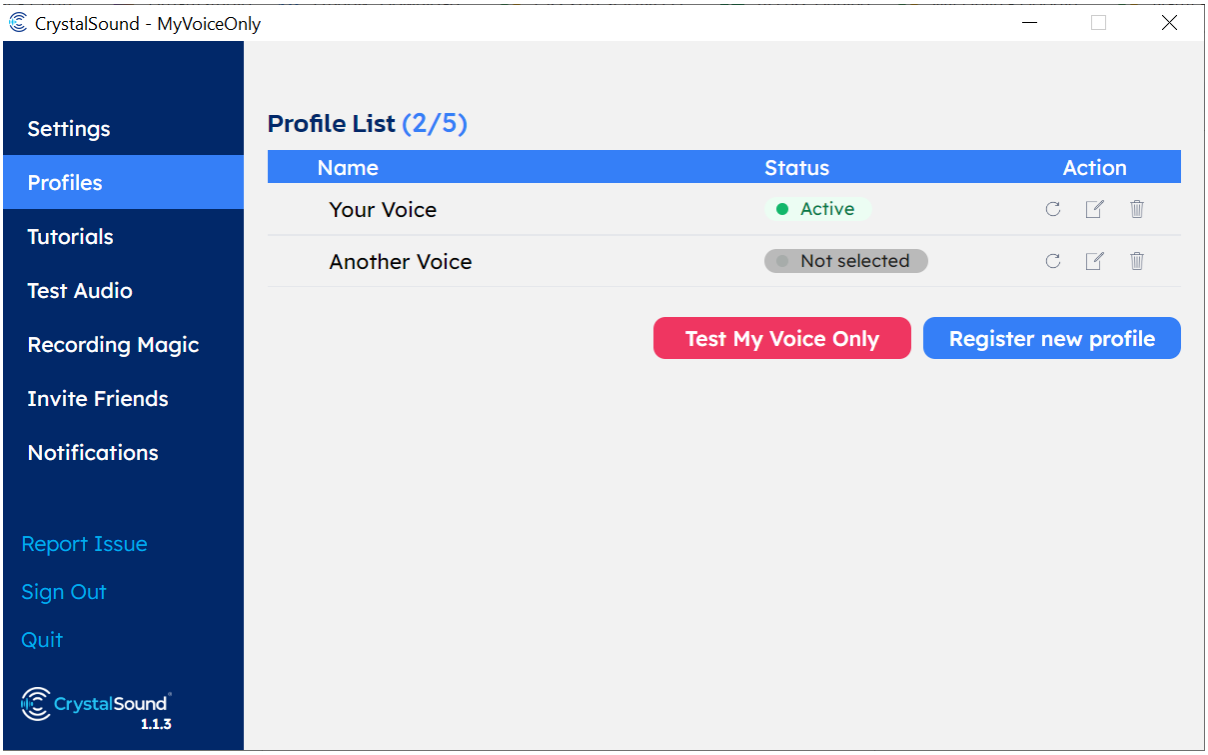
3. If the registration fails, please check the error message and try again.

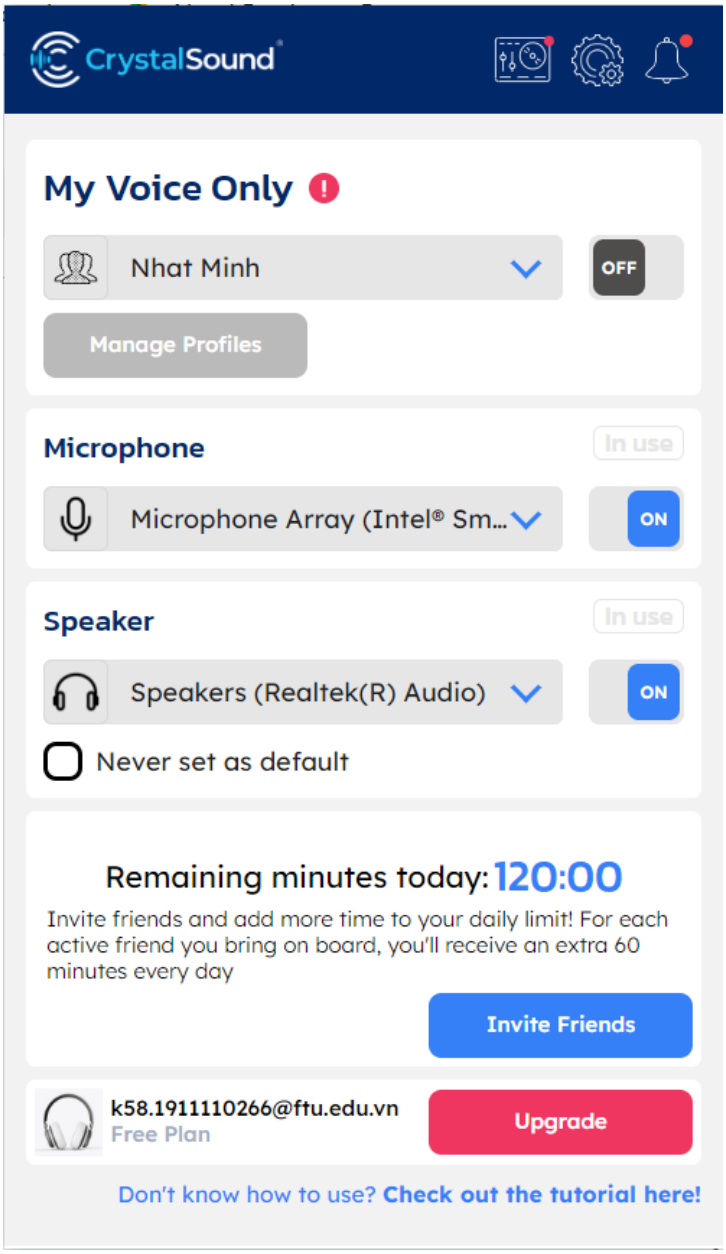


4. Once the registration is complete, you will be prompted to provide a name for it.

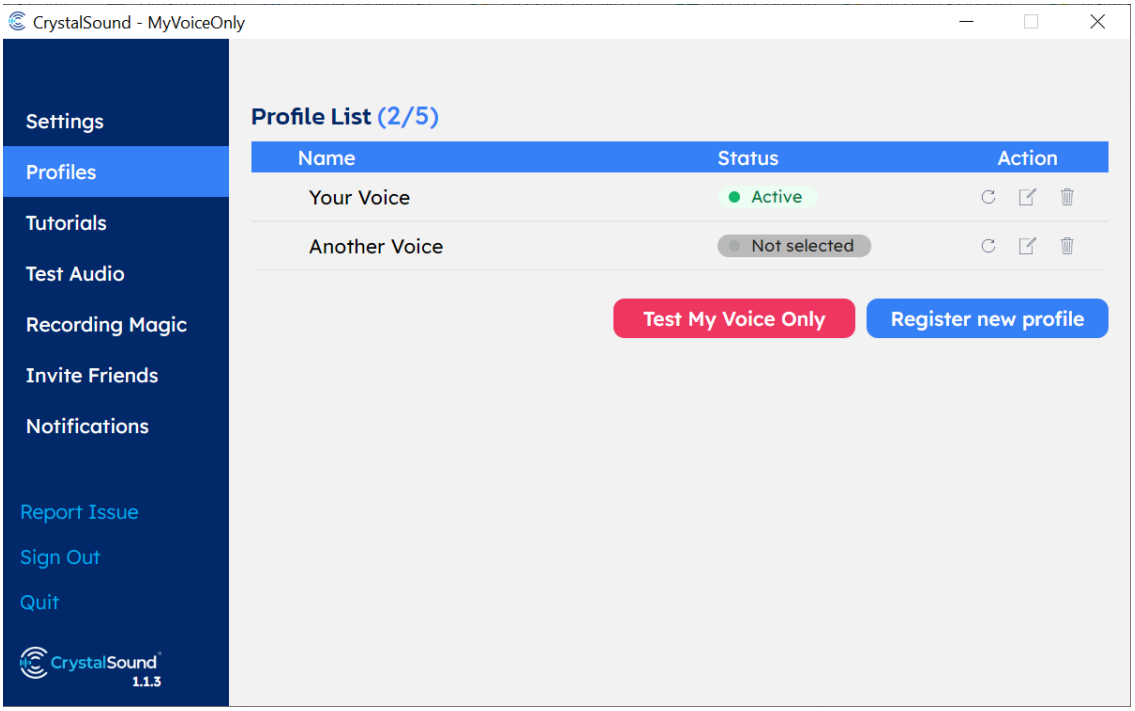


5. You can now select the profile you want to use to access this great feature.




CrystalSound
My Voice Only
Nhat Minh
OFF
Manage Profiles
Microphone
In use
Microphone Array (Intel® Sm...
ON
Speaker
In use
Speakers (Realtek(R) Audio)
ON
Never set as default
Remaining minutes today: 120:00
Invite friends and add more time to your daily limit! For each active friend you bring on board, you'll receive an extra 60 minutes every day
Invite Friends
k58.1911110266@ftu.edu.vn
Free Plan
Upgrade
Don't know how to use? Check out the tutorial here!

6. You have the ability to register up to five profiles, update your current profile, and rename or delete any of them. To perform any of these actions, simply click on the "Manage Profile" button.

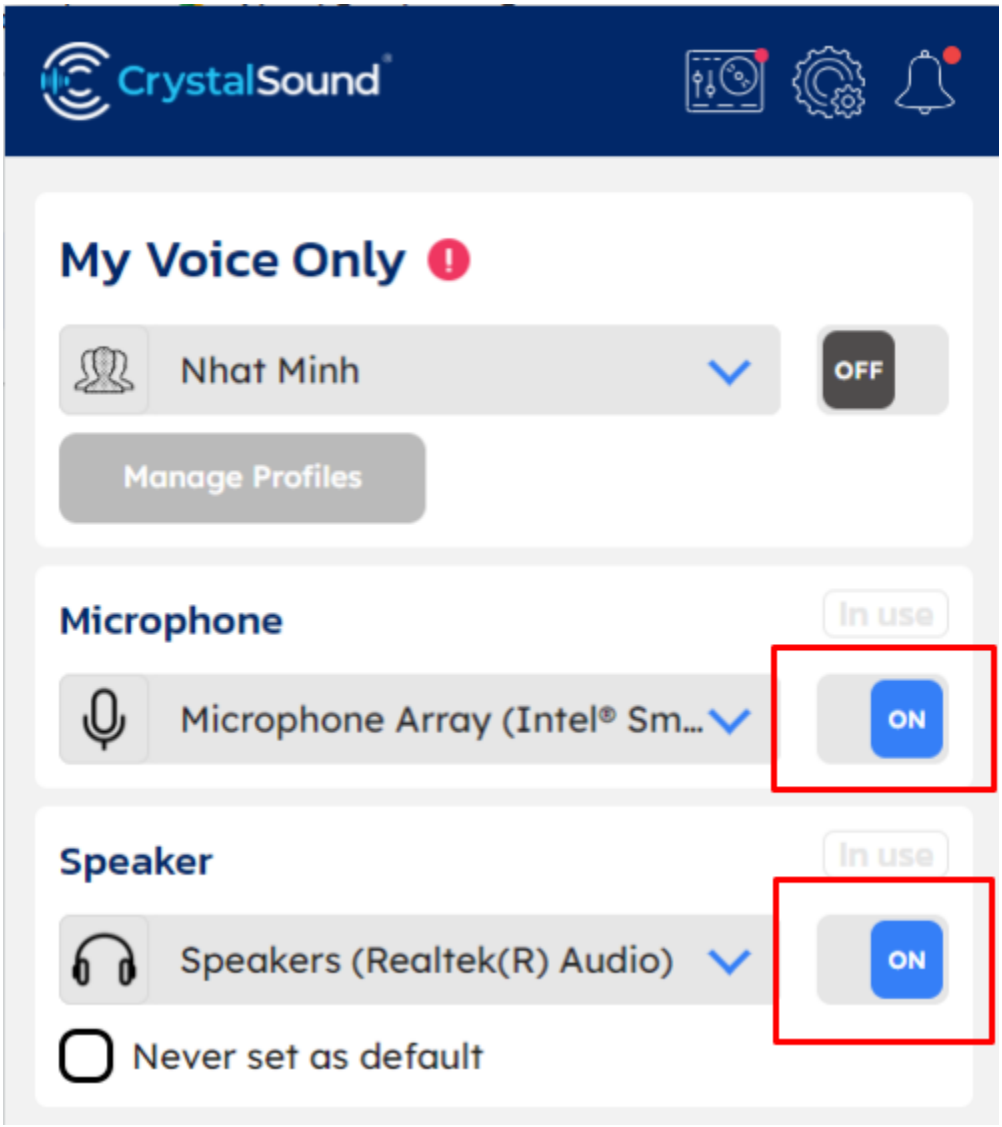


Bi-directional Noise reduction with CrystalSound

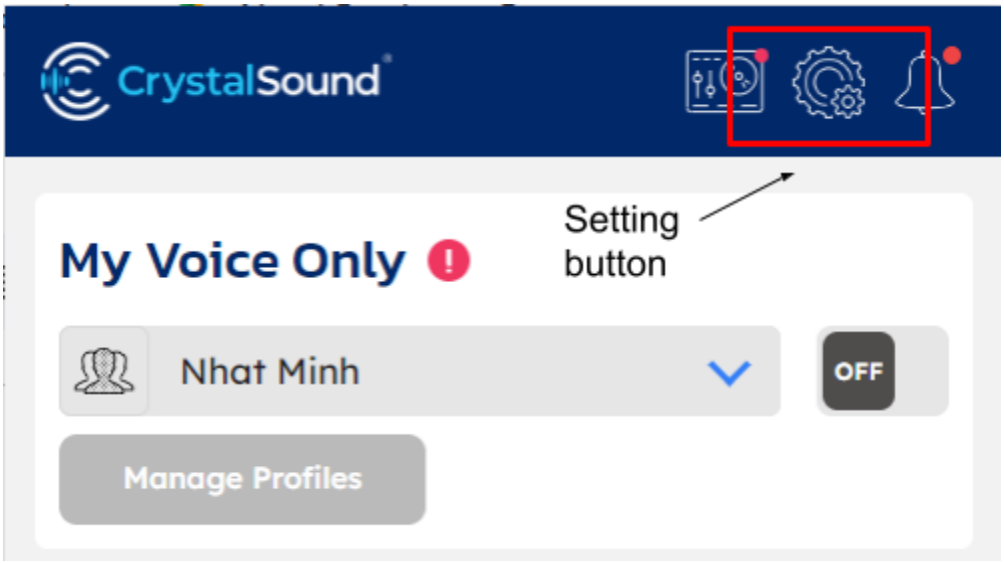
CrystalSound MVO is an advanced speech enhancement technology that provides a clear and seamless audio experience in both directions of communication. This user manual provides step-by-step instructions on how to use noise reduction features.

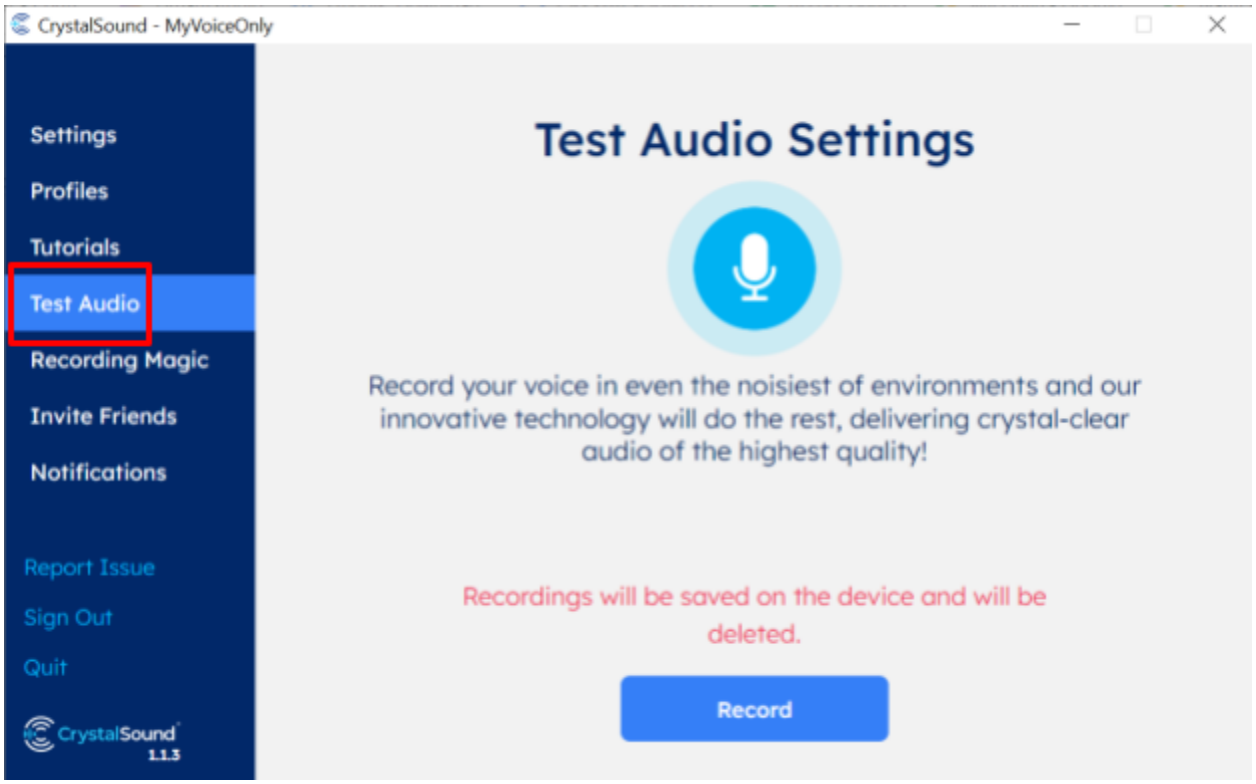
To activate noise reduction:

1. Launching CrystalSound on your devices.
2. Select your microphone and speaker and click the Toggle button on to activate the feature.

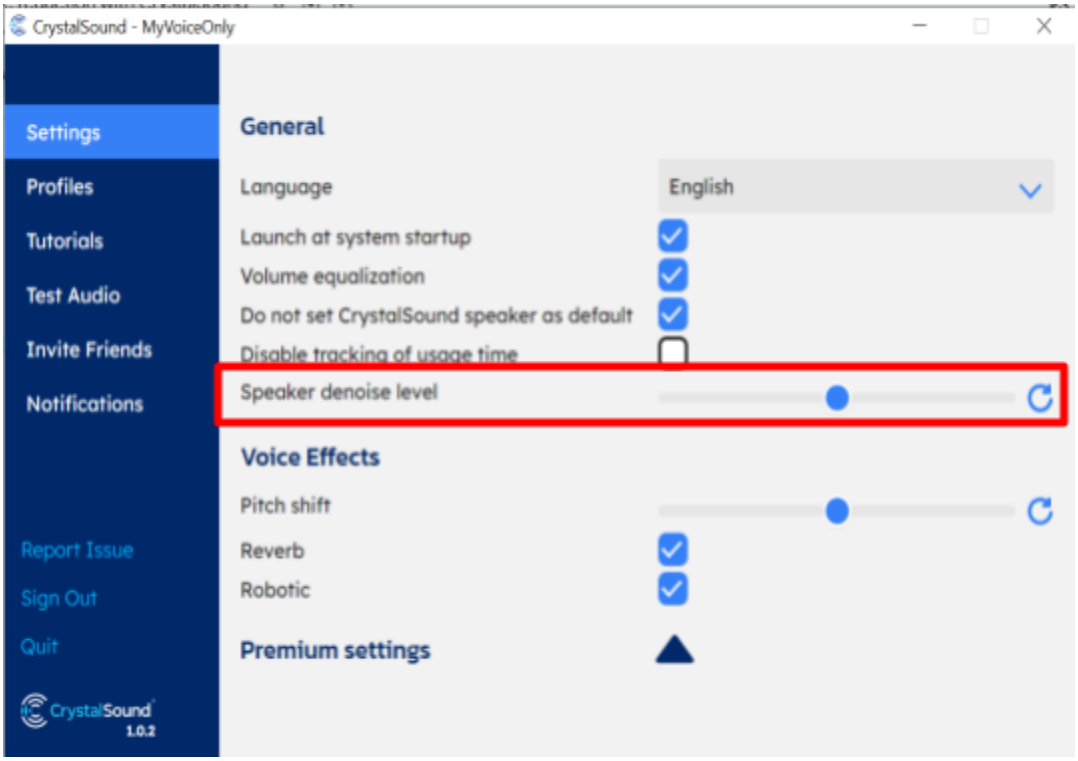


3. To ensure that the feature is activated and functioning correctly, make a test by recording an audio clip while in a noisy environment. Click on the Setting button then click to Test audio. Follow the instructions on the screen.





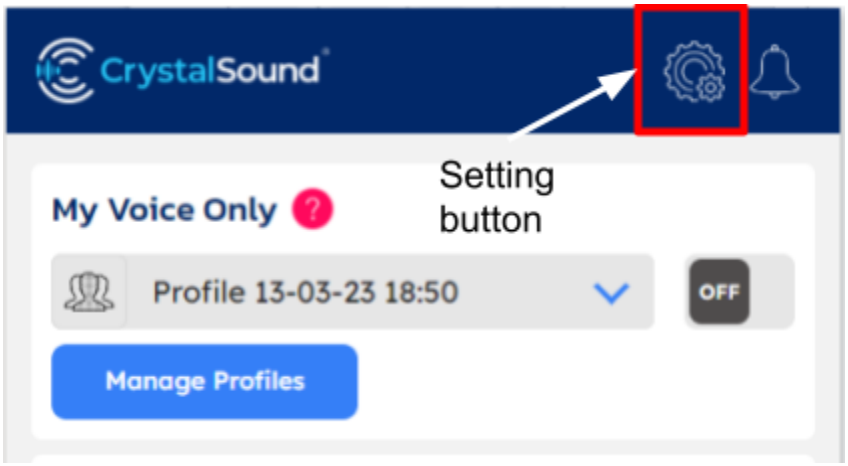
4. If you want to adjust the noise reduction settings for several reasons, e.g., to know the conversation's still going on, slide the bar left or right to increase or decrease the speaker denoise level in settings. From there, you can modify the strength of the noise reduction feature to fit your preferences.

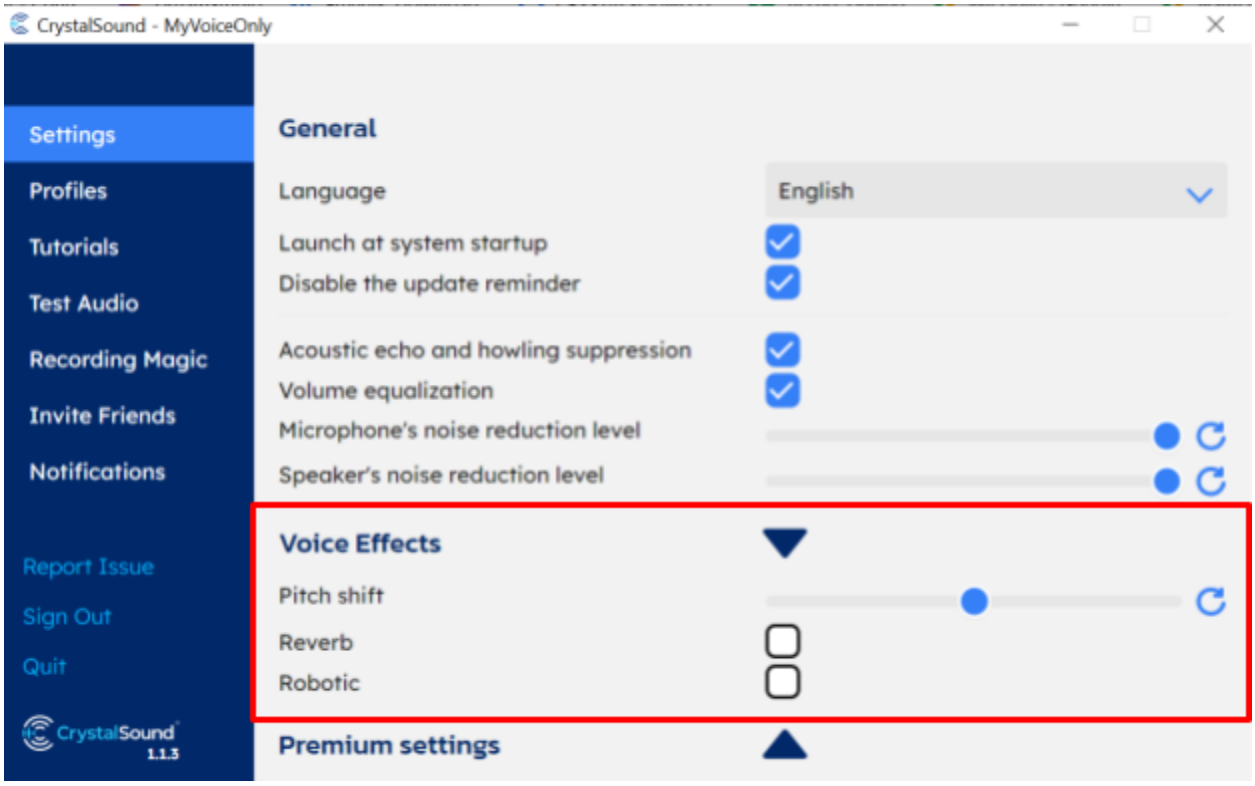


Voice effects with CrystalSound

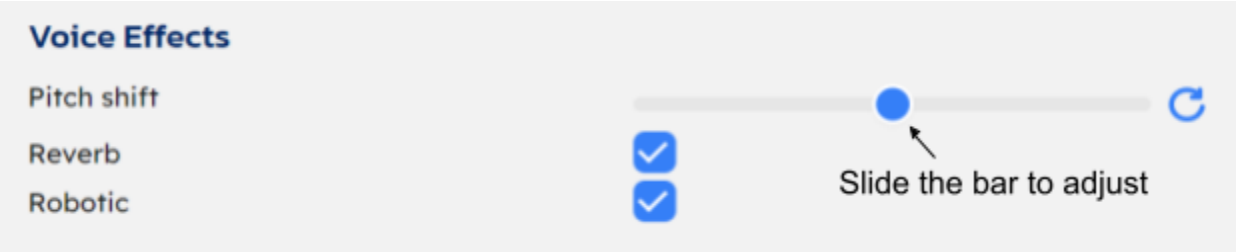
One of the notable features of CrystalSound is the ability to customize your voice effect during calls, online meetings, and recordings. With this feature, you have the option to sound like a chipmunk or robot or reverse, adding an element of excitement to your conversations with friends. To utilize this feature, follow the instructions below.

1. Launching CrystalSound on your device.
2. Click the Setting button on the right corner.





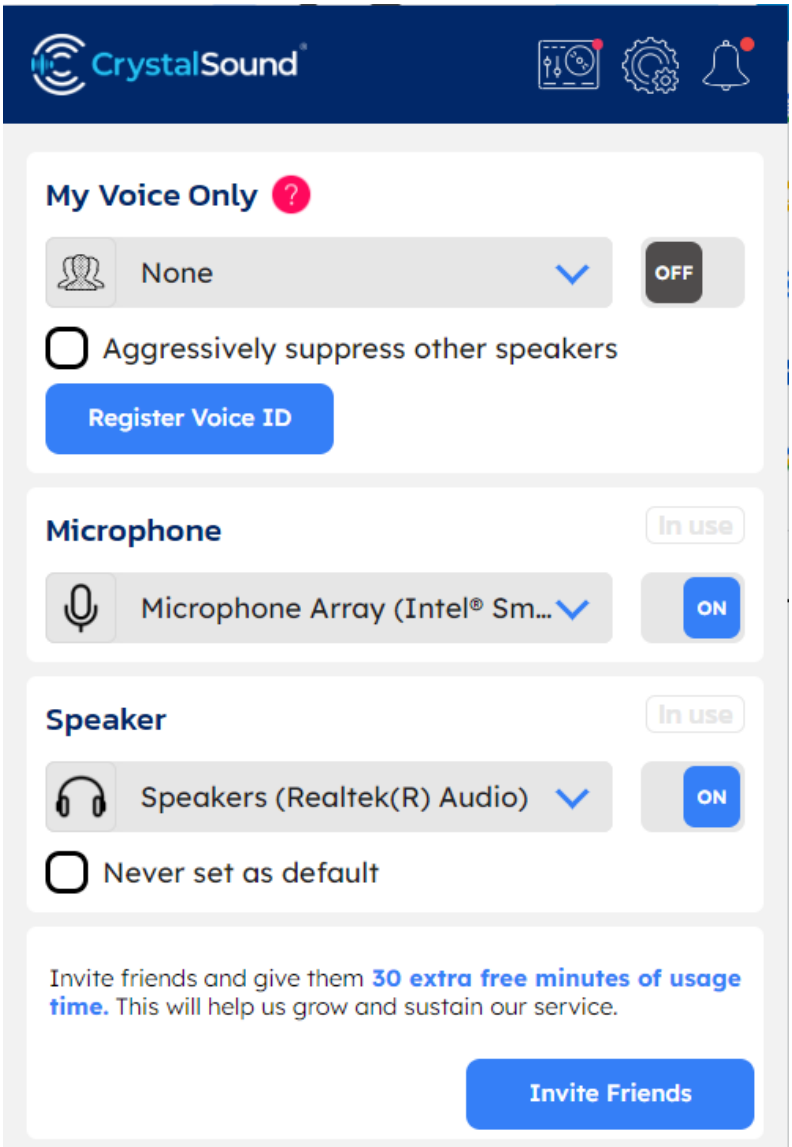
3. In the audio setting, look at the Voice Effects, you can choose Reverb or Robotic effect for your call. You also can slide the bar to adjust the pitch shift of your voice.



Recording magic

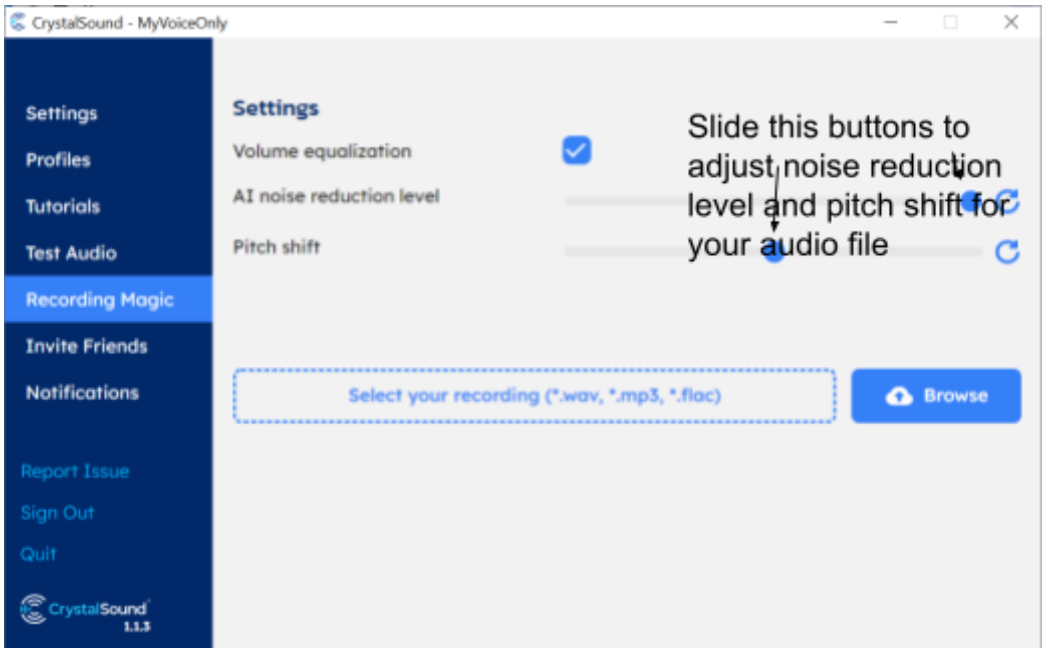
Recording Magic feature is a powerful tool designed to effortlessly remove background noise, enhance the quality of your recordings, ensuring that your audio sounds crystal-clear and professional. In this guide, we'll walk you through the simple steps to utilize this feature effectively.

1. Launching CrystalSound on your device.

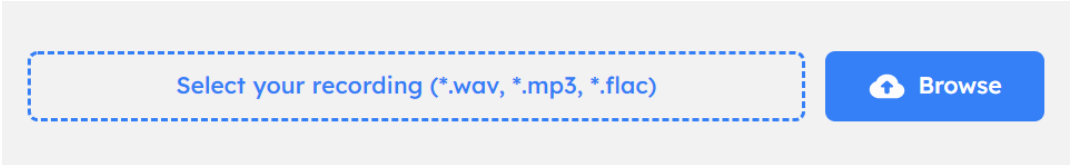


2. Click the Recording Magic button on the right corner.

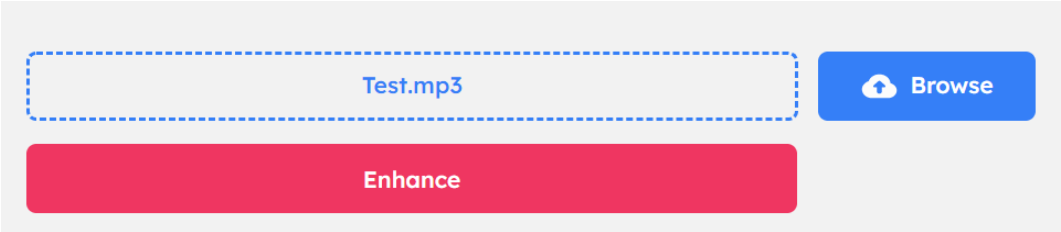
3. It will lead you to the main dashboard of Recording Magic.You can use the provided sliders to fine-tune the level of noise reduction and pitch shift. This is particularly useful if you want to retain some ambient sound or change the shift of your voices.

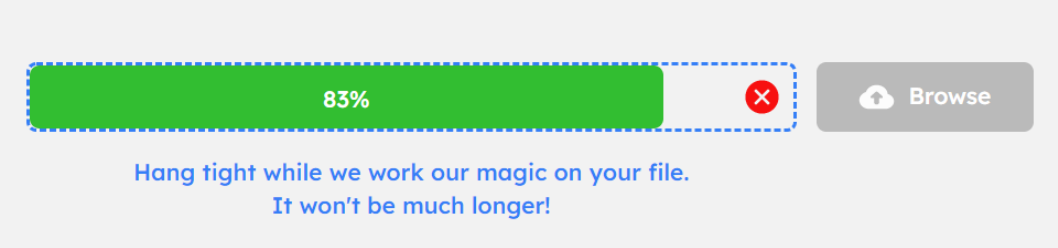


4. Click on the 'Browse' or ‘Select your recording’ button to upload the audio file you want to enhance. The file should be on your computer with format: *.wav, *.mp3, *.flac.

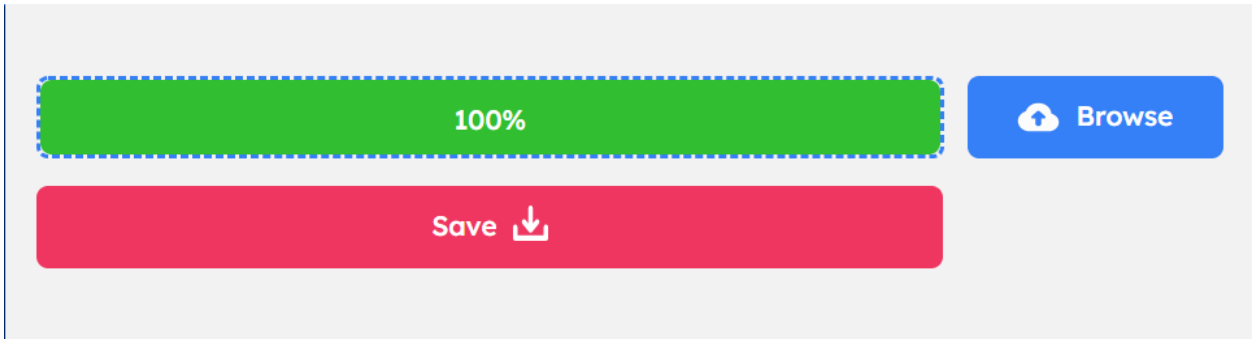


5. After uploading, click ‘Enhance’ to start the process.Larger files might take a bit longer.

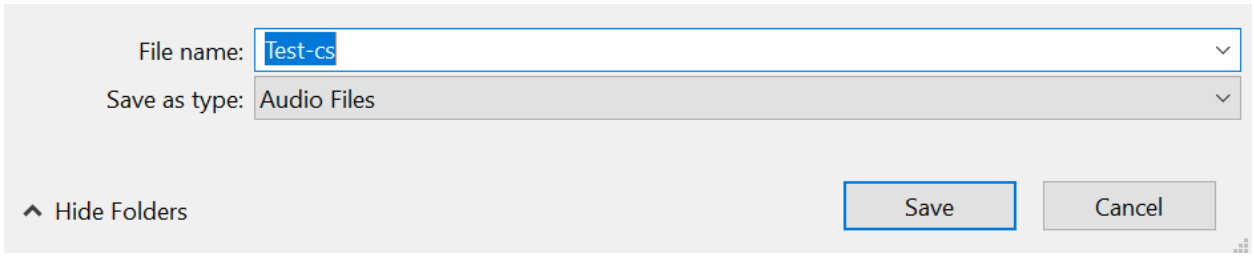




6. After the process is completed, click on the ‘Save’ button to download the edited audio.



7. Rename and save to your computer.

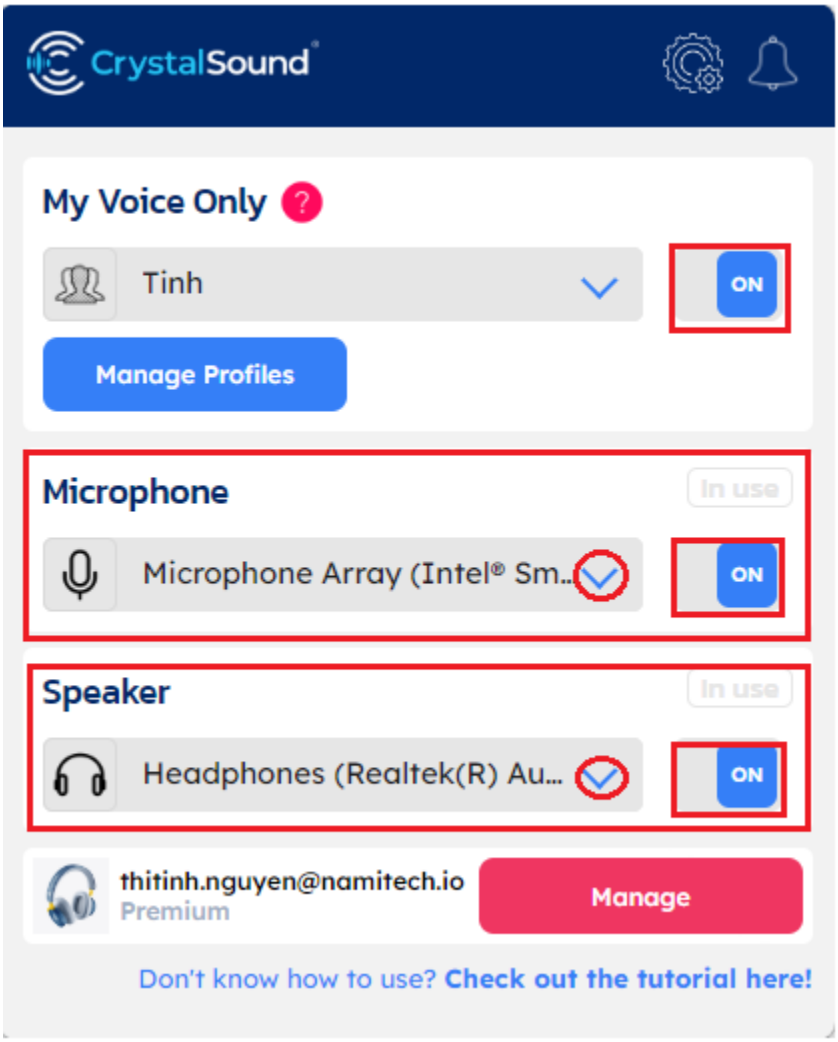


Using CrystalSound

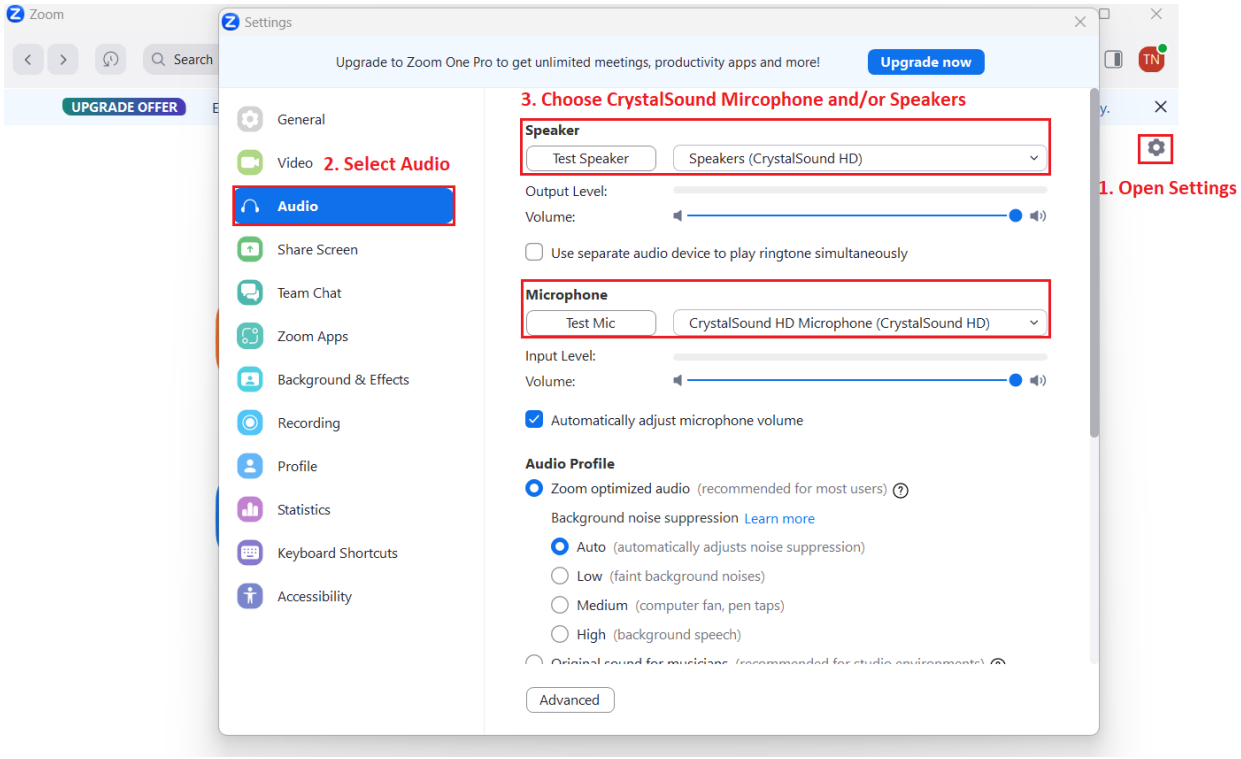
Setting up CrystalSound with Zoom

Follow these simple steps to configure **CrystalSound** for use with **Zoom**:

1. Open **CrystalSound** and select the physical microphone and speaker you want to use. We recommend using both the microphone and speaker simultaneously to maximize the user experience. Note that the "Not used" indicator will change to "In Use" whenever an application is using them.



2. Go to the **Zoom** page and click on **Settings**. From there, select **Audio** and choose your **CrystalSound** devices as your speaker and/or microphone.

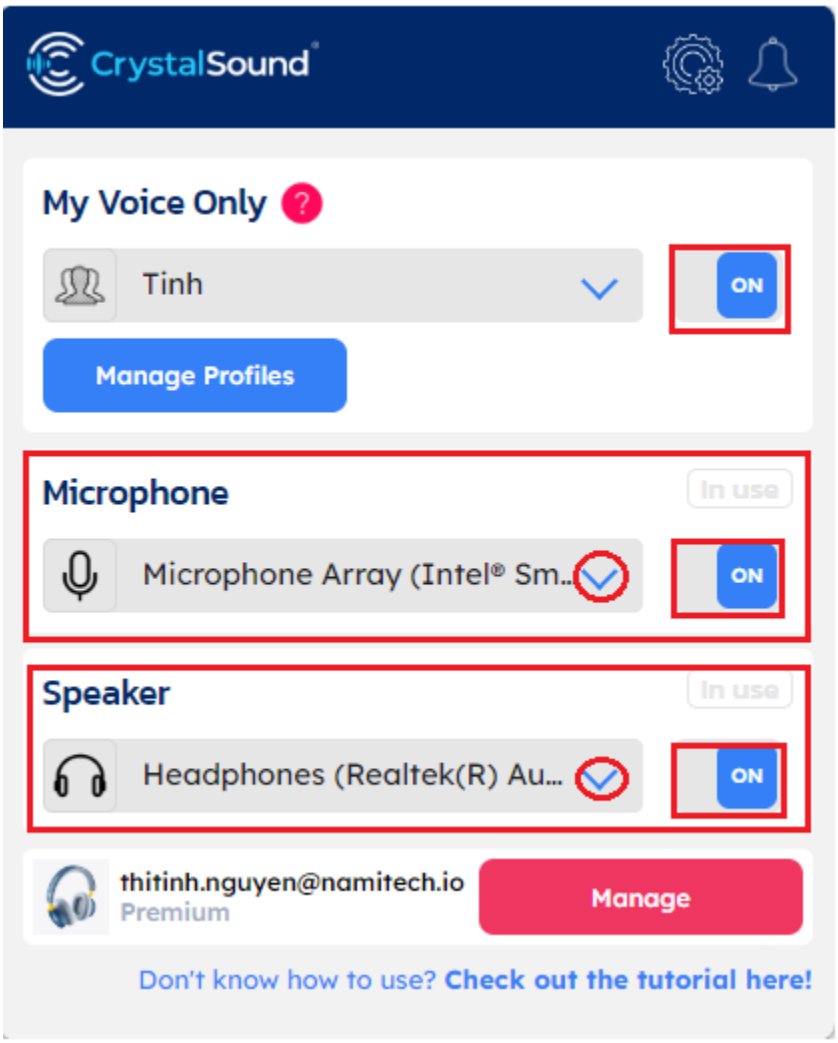


That's it! You're all set to start using your **CrystalSound** devices with **Zoom**.

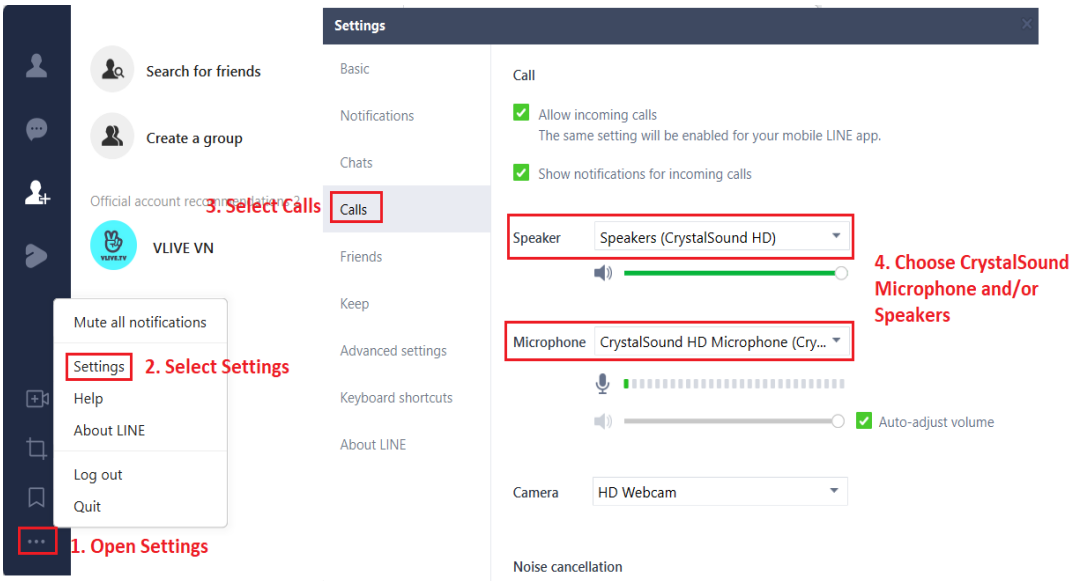
Setting up CrystalSound with Line

Follow these simple steps to configure **CrystalSound** for use with **LINE**:

1. Open **CrystalSound** and select the physical microphone and speaker you want to use. We recommend using both the microphone and speaker simultaneously to maximize the user experience. Note that the "Not used" indicator will change to "In Use" whenever an application is using them.



2. In the **LINE** application, find and select the **Settings** icon and select **Settings**. From there, select **Calls** and choose your **CrystalSound** devices as your speaker and/or microphone.

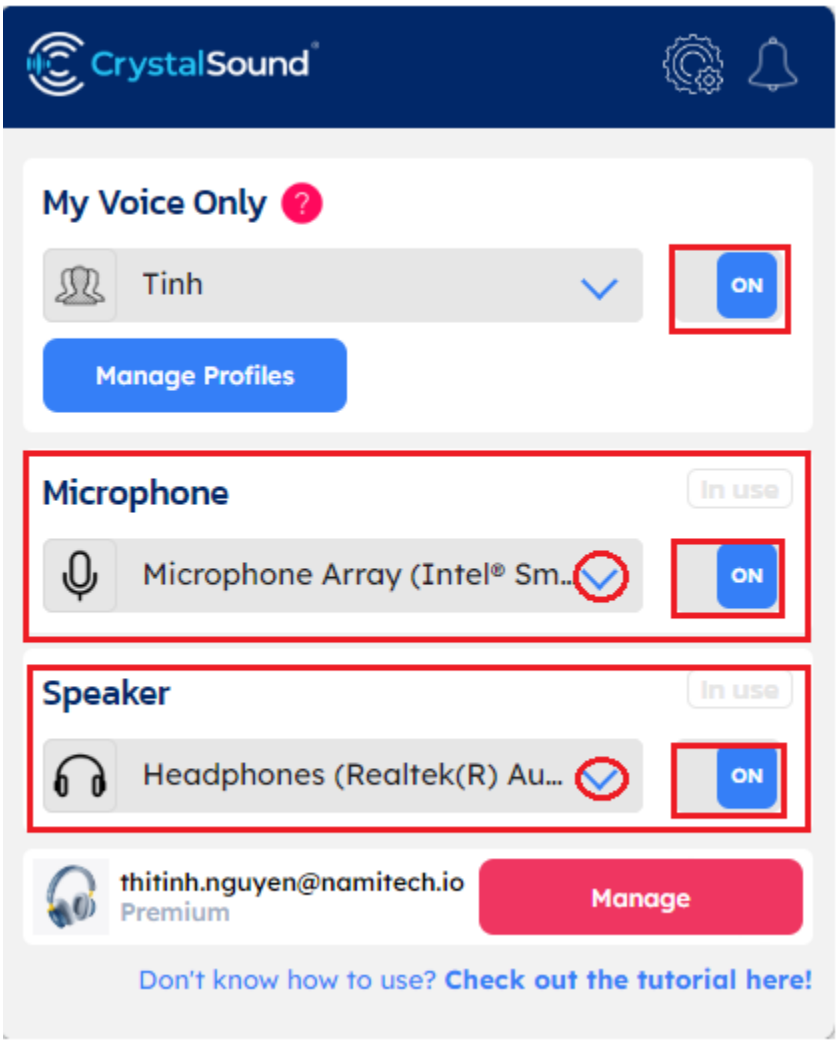


That's it! You're all set to start using your **CrystalSound** devices with **LINE**.

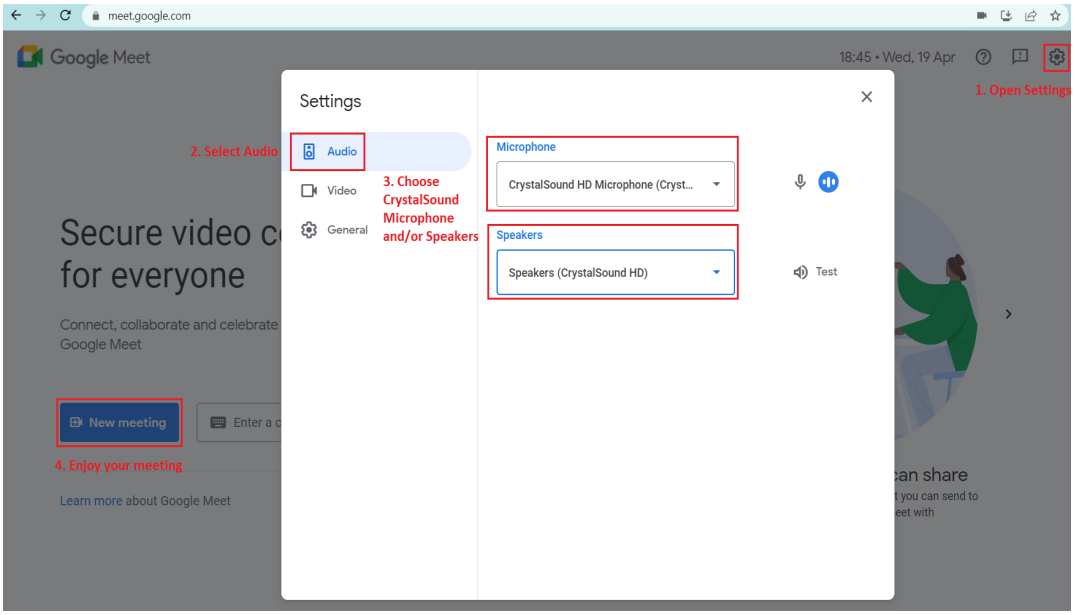
Setting up CrystalSound with Google Meet

Here are a few simple steps to configure **CrystalSound** for use with **Google Meet**:

1. Open **CrystalSound** and select the physical microphone and speaker you want to use. We recommend using both the microphone and speaker simultaneously to maximize the user experience. Note that the "Not used" indicator will change to "In Use" whenever an application is using them.



2. Go to the **Google Meet** page and click on **Settings**. From there, select **Audio** and choose your **CrystalSound devices** as your speaker and/or microphone.



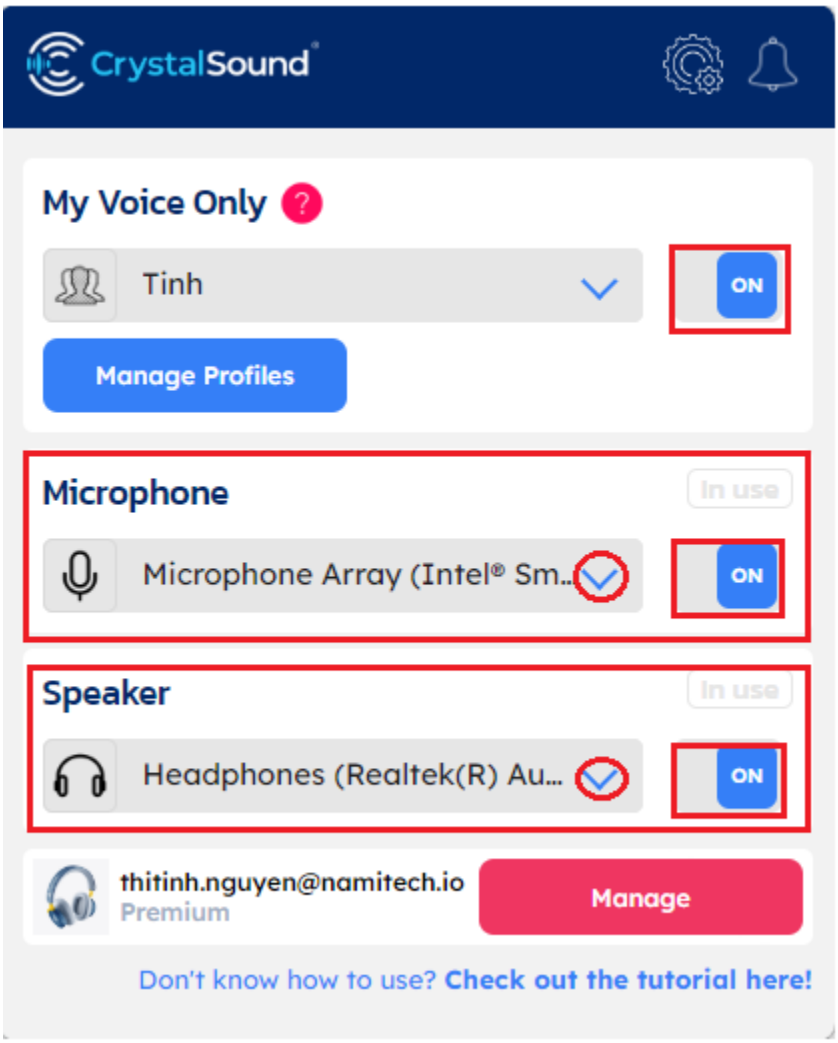
Note that some browsers, such as Safari, may not allow you to switch your speaker. However, others, such as Google Chrome, will allow you to make the change.

That's it! You're all set to start using your **CrystalSound** devices with **Google Meet**.

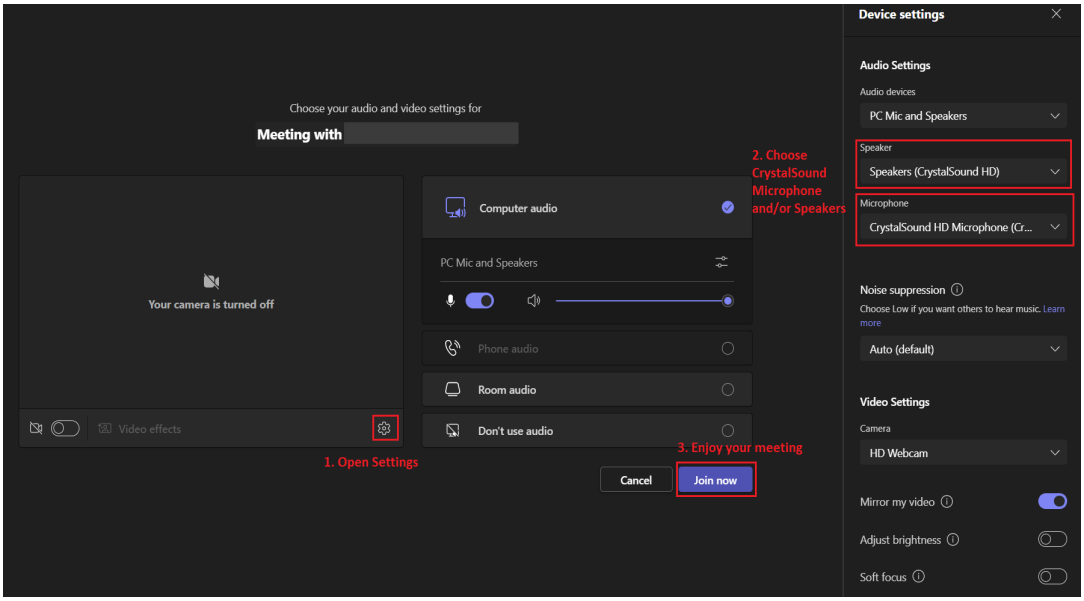
Setting up CrystalSound with Teams

Follow these simple steps to configure **CrystalSound** for use with **Teams**:

1. Open **CrystalSound** and select the physical microphone and speaker you want to use. We recommend using both the microphone and speaker simultaneously to enhance the user experience. Note that the "Not used" indicator will change to "In Use" whenever an application is using them.



2. In **Teams**, go to the meeting window and click on the **Settings** icon. From there, select **Audio** and choose your **CrystalSound device(s)** as your speaker and/or microphone.

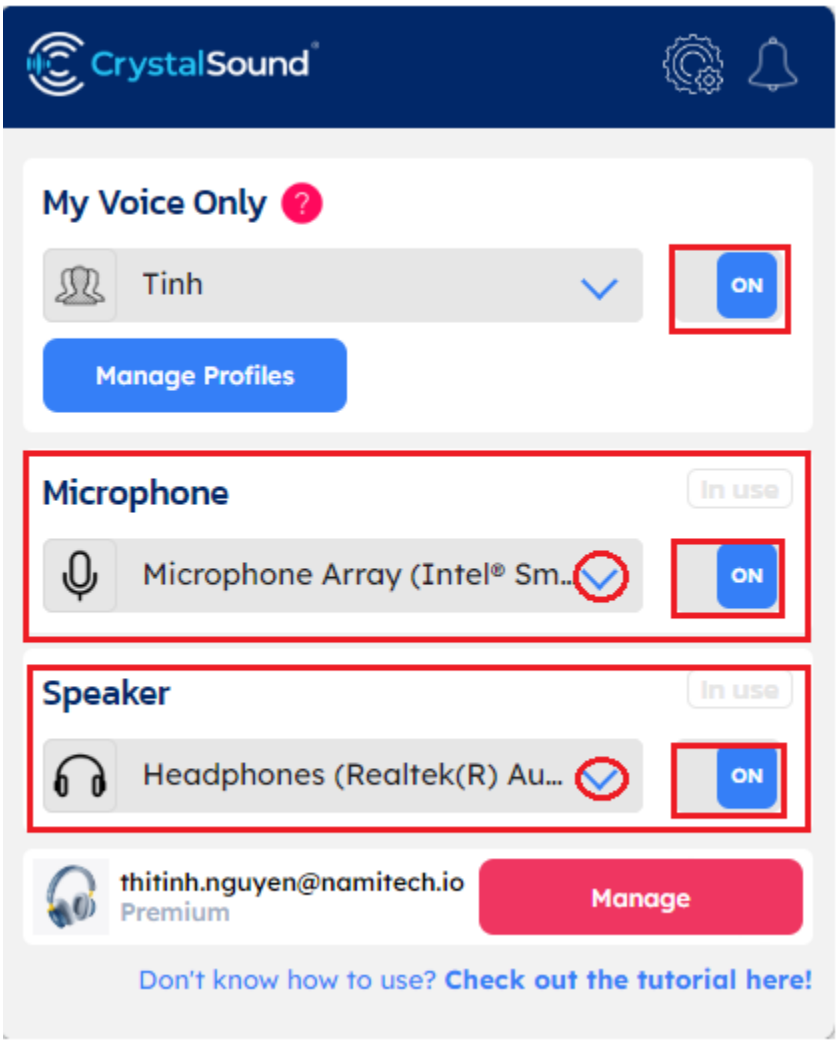


That's it! You're all set to start using your **CrystalSound** devices with **Microsoft Teams**.

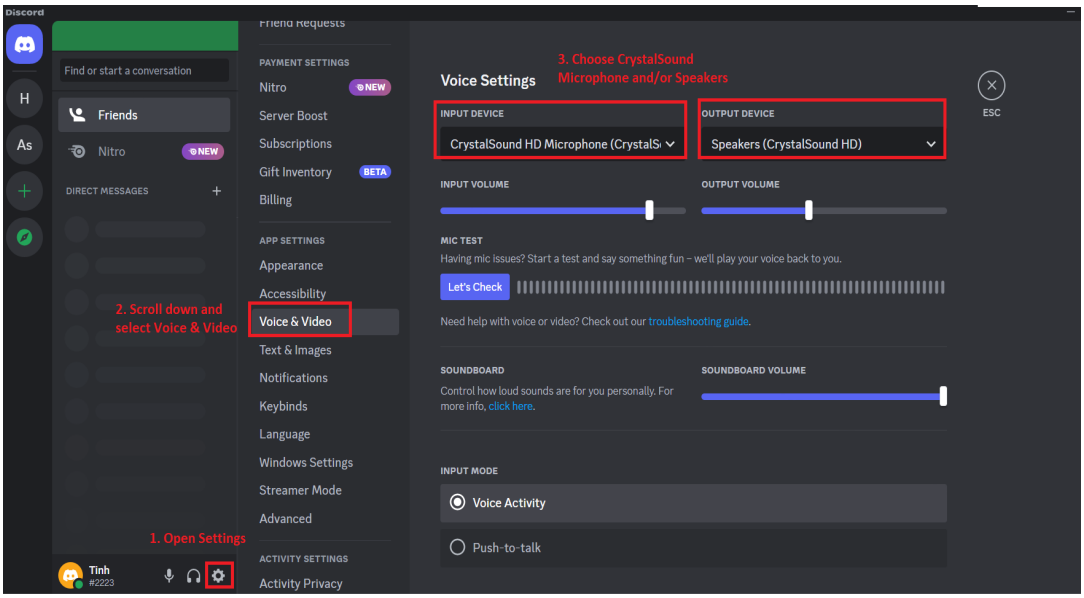
Setting up CrystalSound with Discord

To configure **CrystalSound** for use with **Discord**, follow these simple steps:

1. Open **CrystalSound** and select the physical microphone and speaker you want to use. We recommend using both the microphone and speaker at the same time to enhance the user experience. Note that the "Not used" indicator will change to "In Use" whenever an application is using them.



2. In the **Discord** application, find and select **Settings** icon. In the **setting window**, scroll down and select **Voice & Video**. From there, choose your **CrystalSound** devices as your speaker and/or microphone.

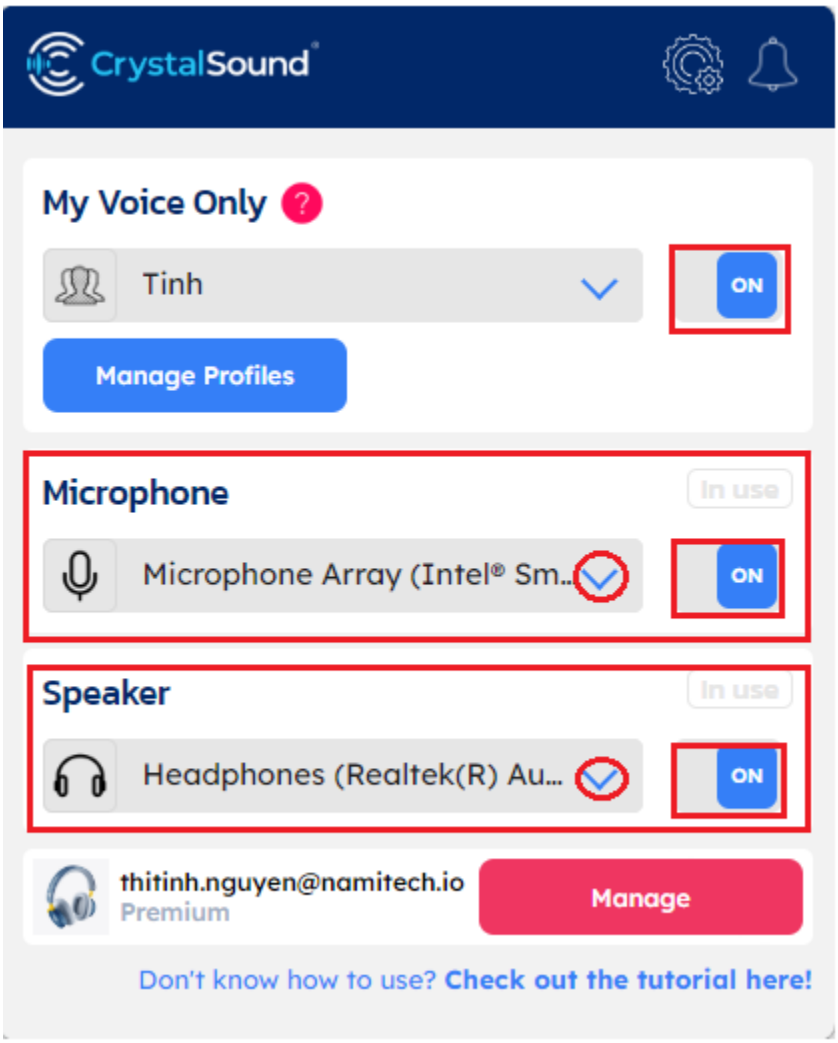


That's it! You're all set to start using your **CrystalSound** devices with **Discord**.

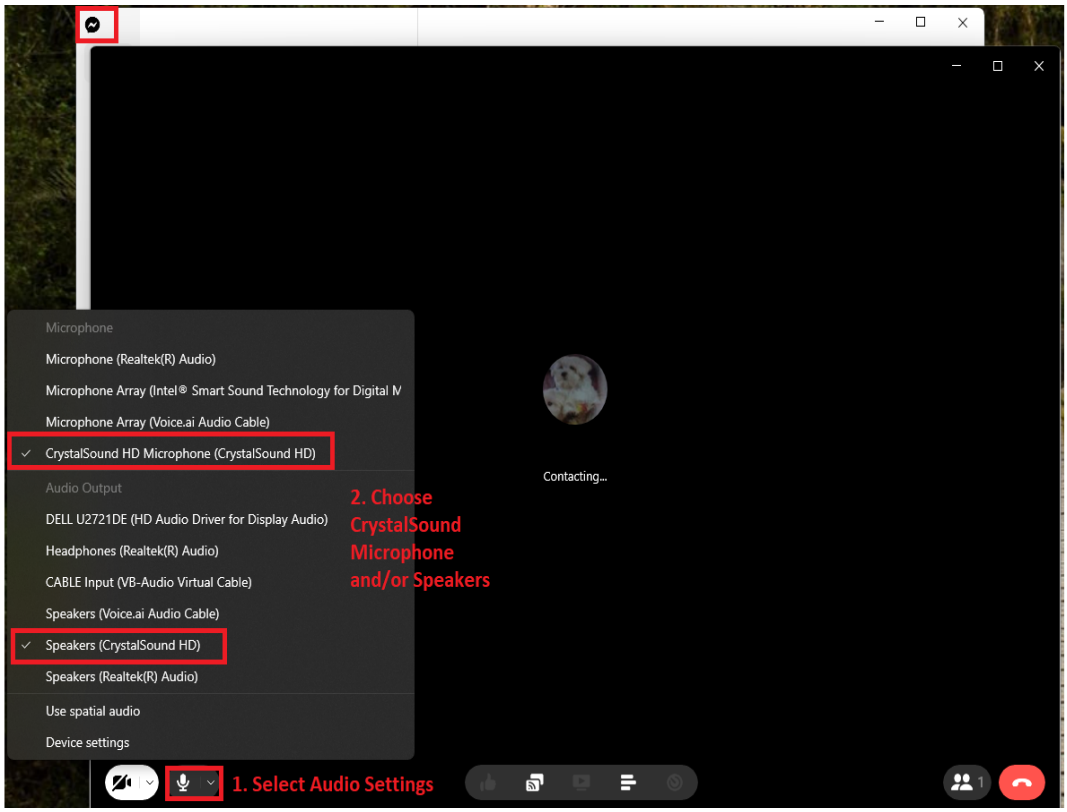
Setting up CrystalSound with Facebook Messenger

To configure **CrystalSound** for use with **Facebook Messenger**, follow these simple steps:

1. Open **CrystalSound** and select the physical microphone and speaker you want to use. We recommend using both the microphone and speaker at the same time to enhance the user experience. Note that the "Not used" indicator will change to "In Use" whenever an application is using them.



2. In the **Messenger** application, select the friend you want to call and click on the call button. In the calling window, find and select **Device Settings**. From there, choose your **CrystalSound** devices as your speaker and/or microphone.

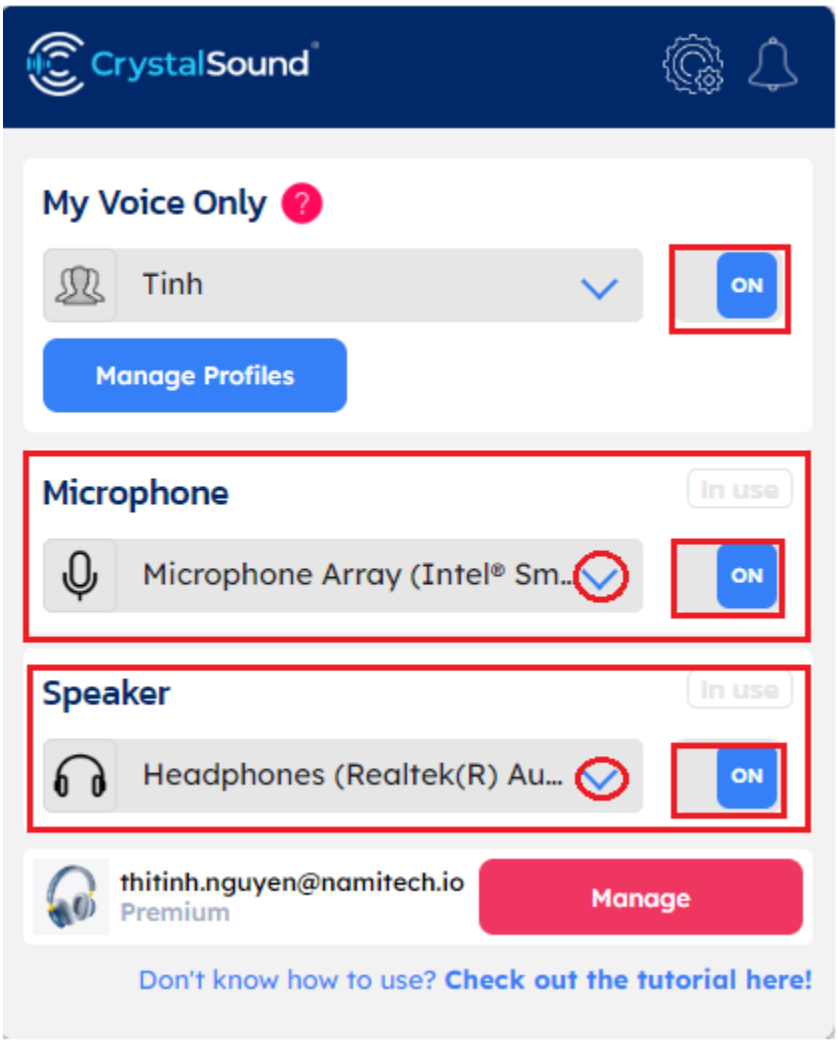


That's it! You're all set to start using your **CrystalSound** devices with **Facebook Messenger**.

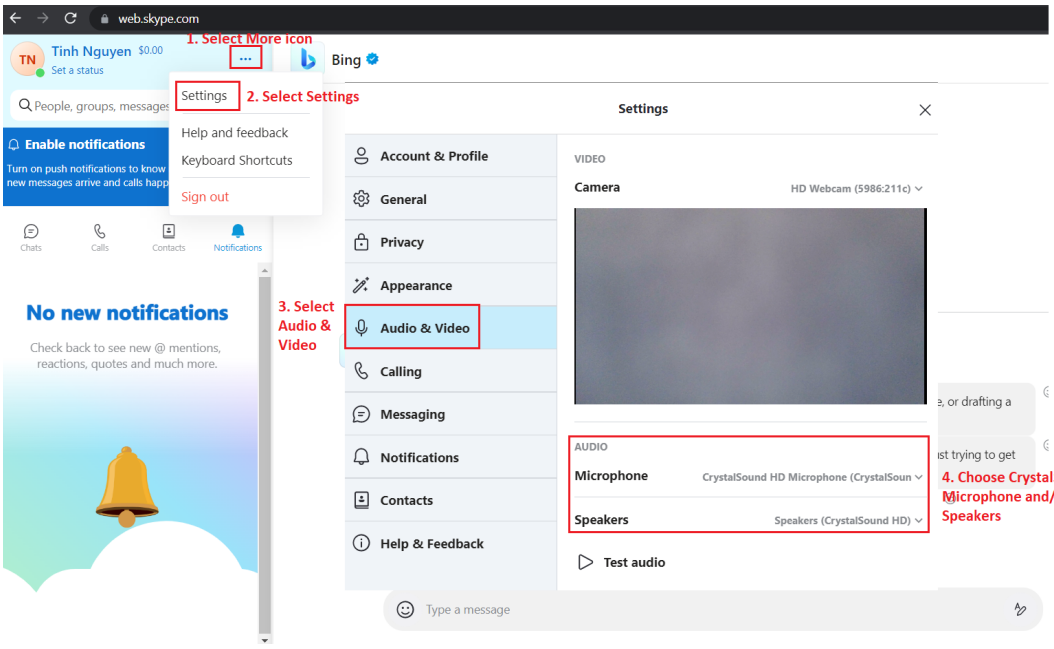
Setting up CrystalSound with Skype

To configure **CrystalSound** for use with **Skype**, follow these simple steps:

1. Open **CrystalSound** and select the physical microphone and speaker you want to use. We recommend using both the microphone and speaker at the same time to enhance the user experience. Note that the "Not used" indicator will change to "In Use" whenever an application is using them.



2. In the **Skype** application, find and select **More** icon and select **Settings**. From there, select **Audio & Video** and choose your **CrystalSound** devices as your speaker and/or microphone.

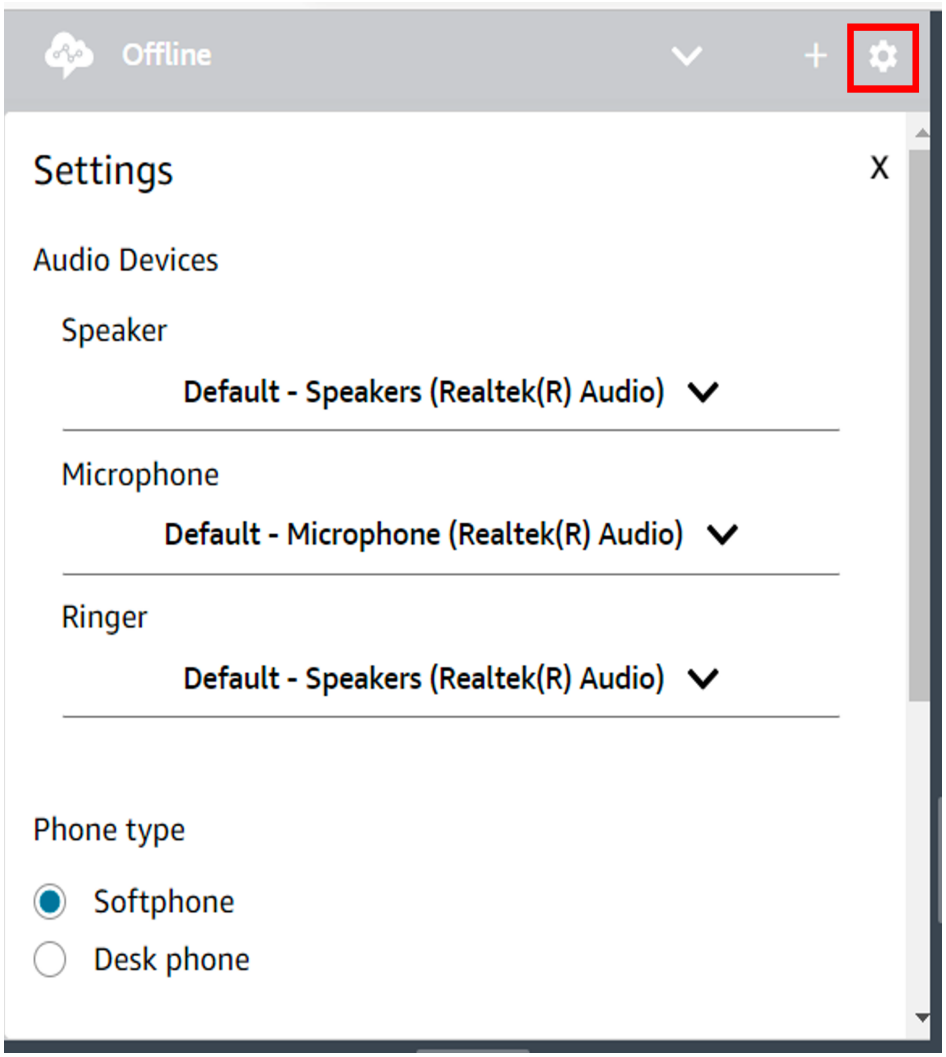


That's it! You're all set to start using your **CrystalSound** devices with **Skype**.

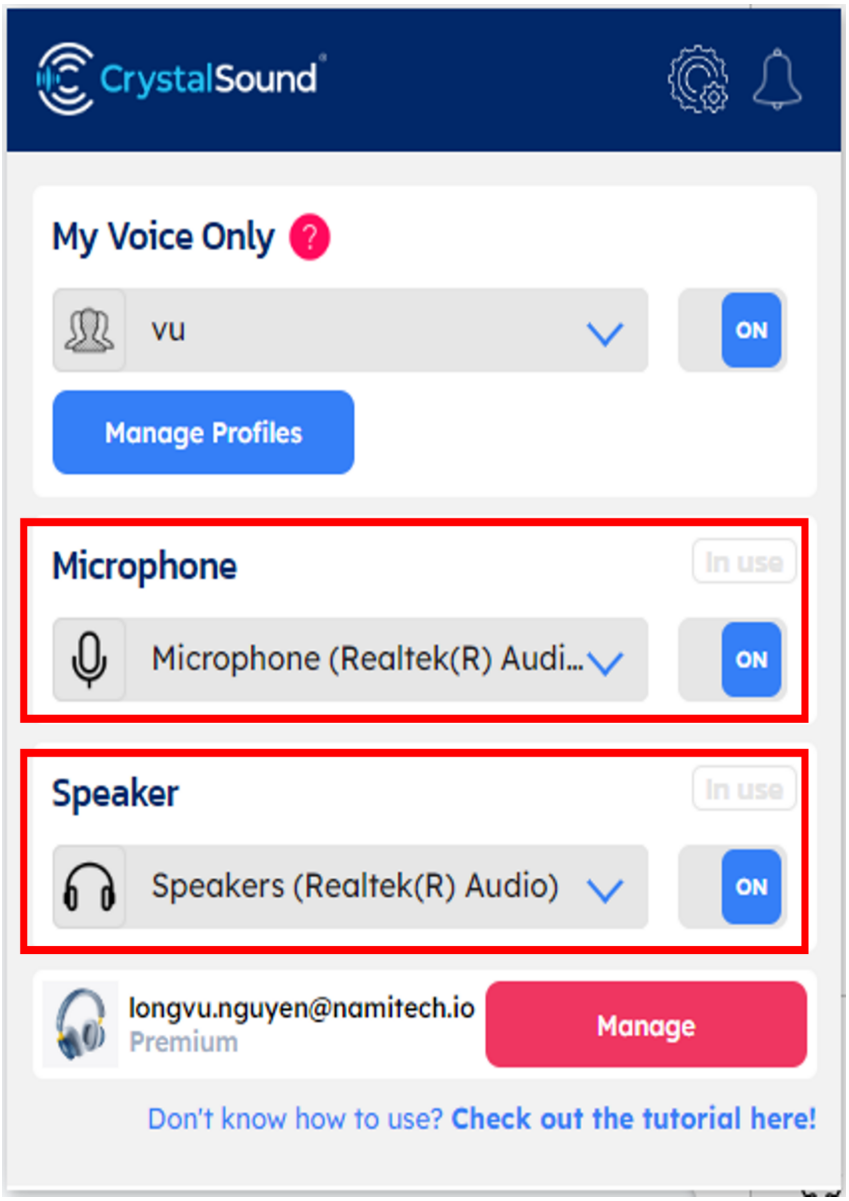
Setting up CrystalSound with Amazon Connect

Change your audio settings to use CrystalSound devices

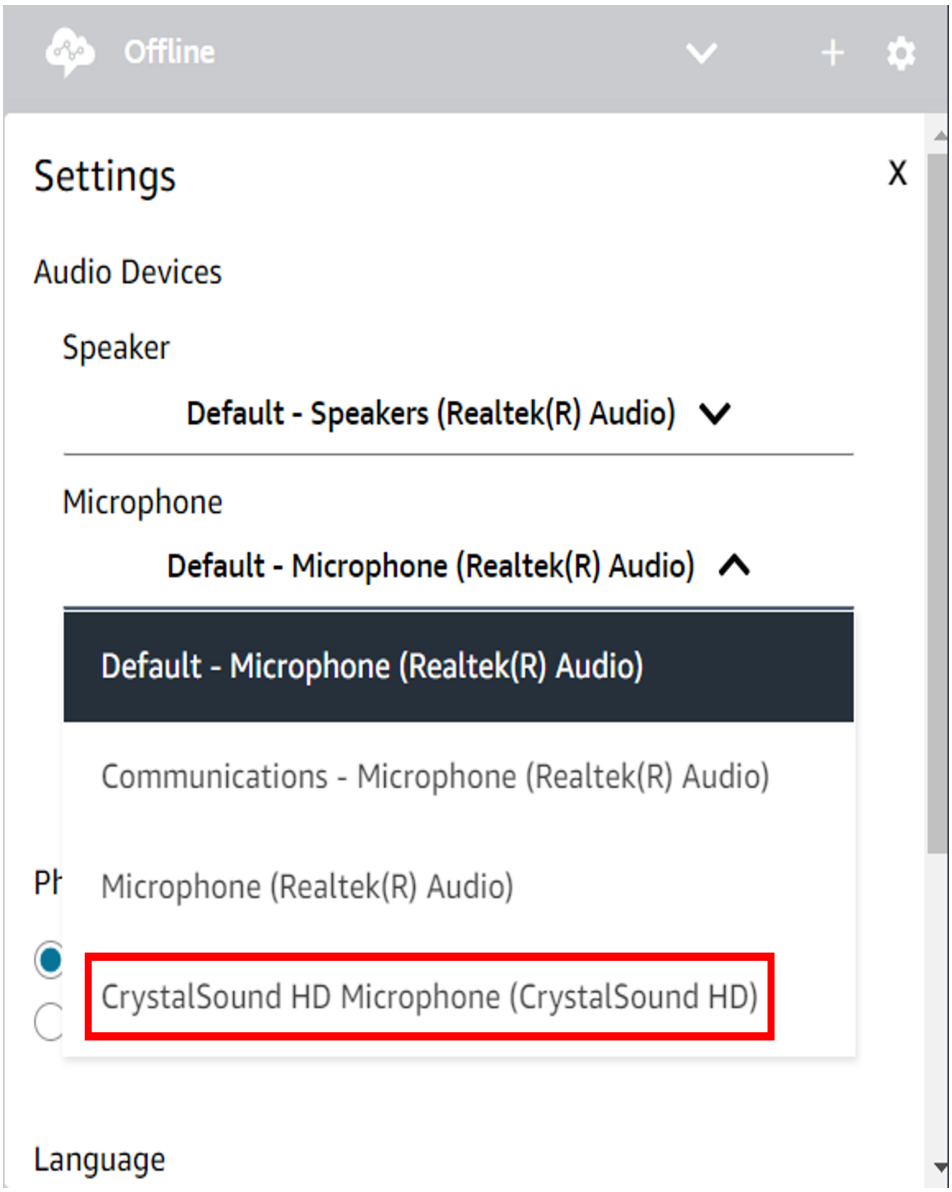
1. In **CCP**, choose **Settings**. The **Settings** dialog box appears, similar to the following image.

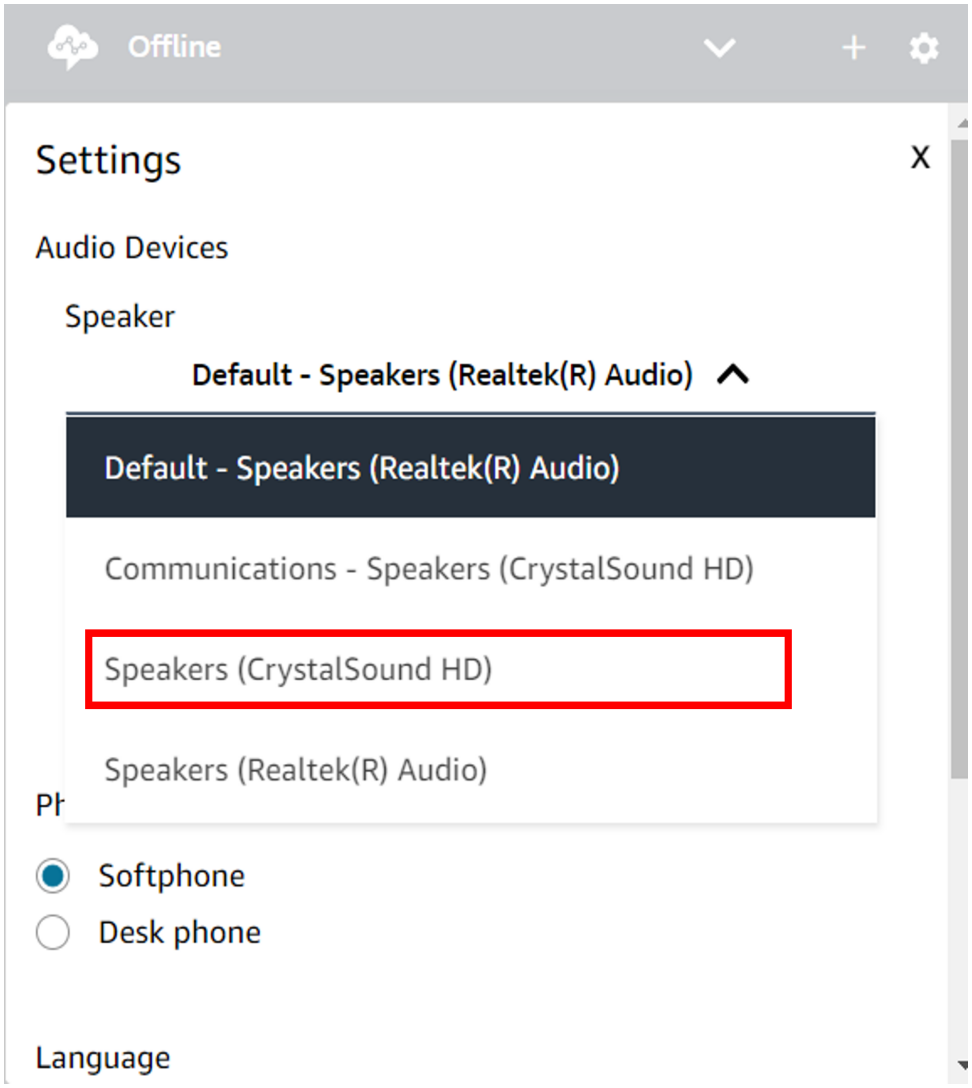


2. Open **CrystalSound**, make sure you are logged in, select the physical audio devices in **CrystalSound Main Screen** which **CrystalSound** will apply to. The microphone and speaker name in **CrystalSound Main Screen** should match with microphone and speaker settings in Step 1.

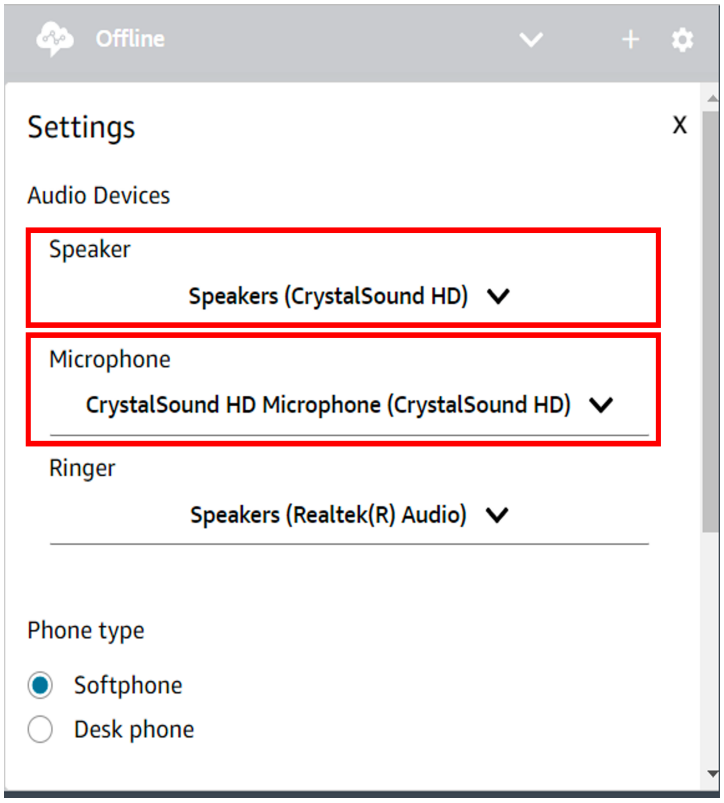


3. Now, in your **CCP Settings,** under **Audio Devices**, use the dropdown to select **CrystalSound Microphone** and **CrystalSound Speaker** as your **Microphone** and **Speaker**, respectively.

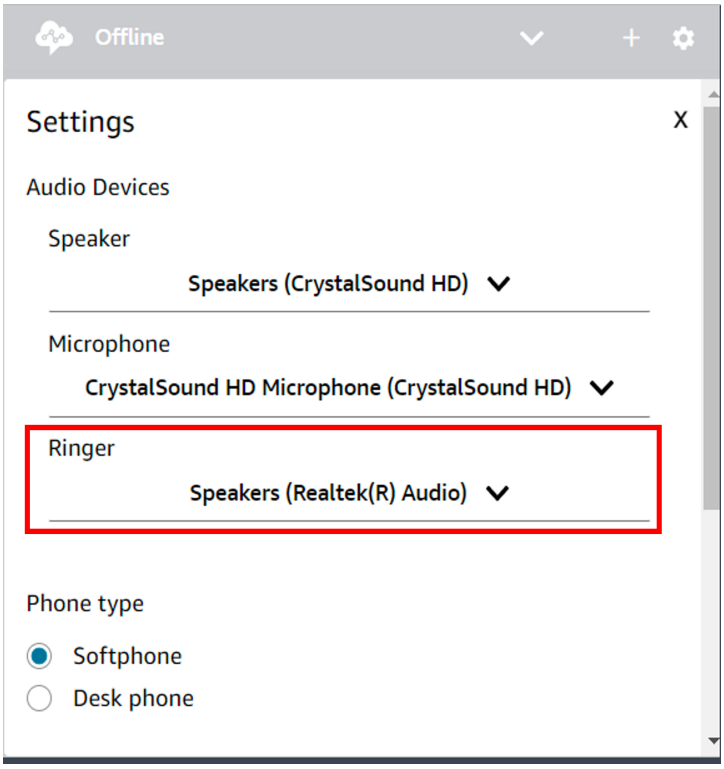




The **Settings** should appear as the following.



*NOTE: please do not select **CrystalSound Speaker** in the Ringer setting because your ringtone and notifications will be suppressed.*



Recording with CrystalSound

In addition to eliminating environmental noise during calls and online meetings, the CrystalSound Noise Reduction feature is also useful for reducing noise in recordings. To use this feature:

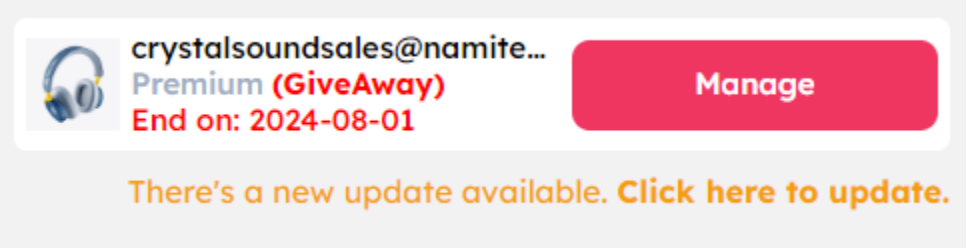
1. Activate the CrystalSound Noise Reduction feature.
2. Open any recording app on your desktop.
3. In the audio settings of the recording app, select CrystalSound as your preferred microphone.

Troubleshooting and FAQ

Troubleshooting

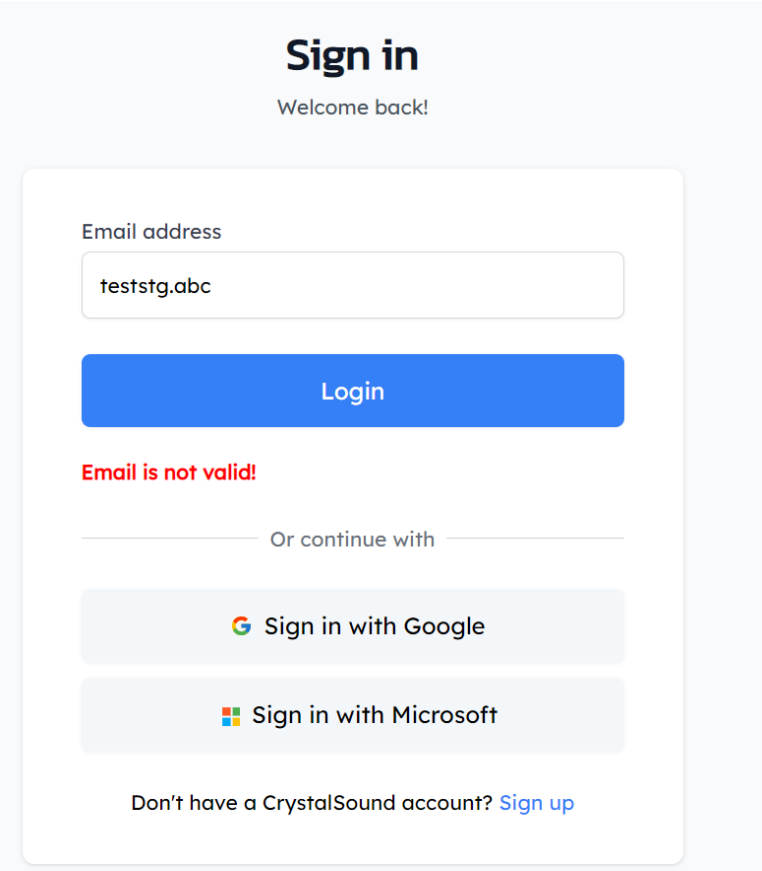
1. **Can't login**
    a. Check spam folder of your email
    b. Login via Google if your email is hosted by Google Workspace
    c. Login via Microsoft if your email is hosted by Microsoft Outlook
2. **Other people can't hear you**
    a. Verify that you are not muted
    b. Check if you are currently selected CrystalSound Microphone in your call application
    c. Check if the correct physical microphone is selected in CrystalSound Main Screen.
    d. Verify that the physical microphone selected in CrystalSound Main Screen is not muted
    e. Verify that CrystalSound is allowed to access microphone
3. **No incoming sound to CrystalSound Speaker**
    a. Check if you are currently selected CrystalSound Speaker in your call application
    b. Check if the correct physical speaker is selected in CrystalSound Main Screen.
    c. Verify that the physical speaker selected in CrystalSound Main App Screen is not muted
4. **CrystalSound Speaker is not loud enough even though its volume is 100%**
    a. Increase volume of the physical speaker that CrystalSound is using. This is a known issue, we will tie CrystalSound volume to the volume of the physical speaker in a future version.
5. **CrystalSound Microphone and/or Speaker are not available**
    a. In certain cases that are uncontrollable by us, the OS will unload the driver of our virtual microphone and speaker. Simply restart CrystalSound will fix the problem in most cases. If restarting CrystalSound wouldn't fix this problem, please reinstall the application or contact us at crystalsoundsupport@namitech.io
6. **Choppy or delayed audio**
    a. Real-time AI-based audio processing can be computationally intensive. If your laptop has low battery or your PC does not meet our minimum requirements, CrystalSound may not be able to process your audio fast enough, and thus, result in choppy audio. Try to plug-in your laptop and close other computationally intensive applications. Turning off premium settings of CrystalSound will also help.
7. **Distorted audio**
    a. When there is too much noise, it may be impossible to restore your speech clearly. In that case, consider finding a quieter environment or turn off CrystalSound.
    b. If incoming audio is a bit distorted, you can reduce the denoise level in CrystalSound's settings to reduce distortion.

8. **Echo**
    a. To remove echo, both CrystalSound Microphone and Speaker must be used together in your voice application.
    b. Try to reduce volume of the physical speaker selected in CrystalSound Main App Screen
    c. Move external physical speaker further away from your microphone to reduce the feedback loop
9. **Can’t remove certain noises**
    a. When noise is extremely loud, it is also not possible to remove the noise completely.
    b. Loud and impulse noises are challenging to remove because the noise impulses are too short for CrystalSound to completely suppress.
    c. CrystalSound employed deep learning to suppress unlimited types of noise but it is not perfect. We keep improving every day based on your feedback. We appreciate it if you use the “report issues” form in CrystalSound settings to send us feedback.
10. **Can’t remove certain voices**
    a. Voice isolation is not easy even for us humans. There are more people with similar voices than people with similar faces. Our voices also change gradually over time. Therefore, doing MyVoiceOnly in real-time with low CPU usage is a technical challenge that still has a ton of room for improvement. Our team is working everyday to improve this technology.
11. **Update notification didn’t show up**
    a. In most cases, when a new version becomes available, you will either receive a pop-up notification prompting you to update or notice a yellow bar at the bottom of the application, reminding you to update. If you do not see either of these prompts, please try quitting the application and reopening it.



Errors and Warnings

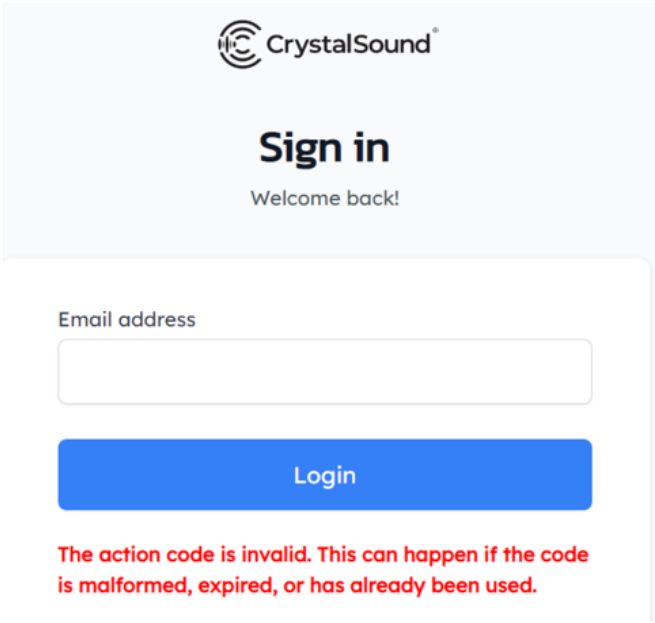
1. Error: Email is not valid:



Cause: The email address you use to register CrystalSound is a spam address or not existing.
Solution:

- Verify your email address is correct
- Use a different email address

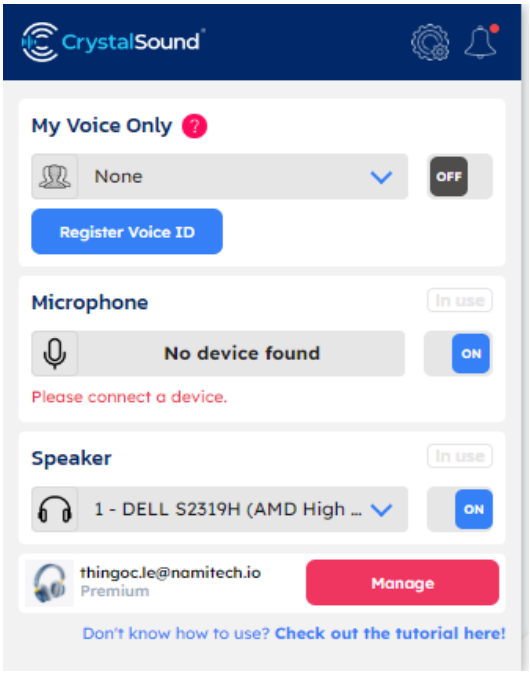
2. Error: The action code is invalid:



Cause: The login link you got from your email has been used for login or it has been expired.
Solution:

- Try again to get a new login link

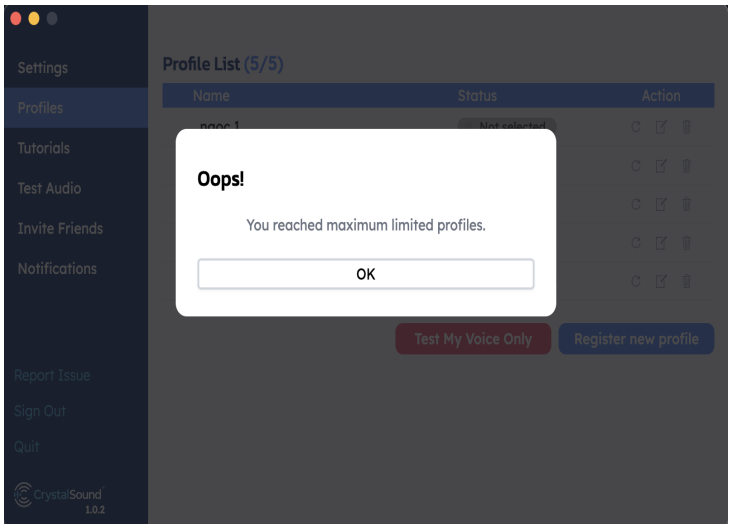
3. Error: Microphone or speaker not found:



Cause: CrystalSound can't find any microphone or speaker available on your PC
Solution:

- Check if audio device is disabled in OS's audio settings and re-enable it
- Check whether you allow CrystaSound to use Microphone in OS's privacy settings
- Check whether your headset is connected to the PC

4. Error: You reached the number of maximum profiles during voice registration

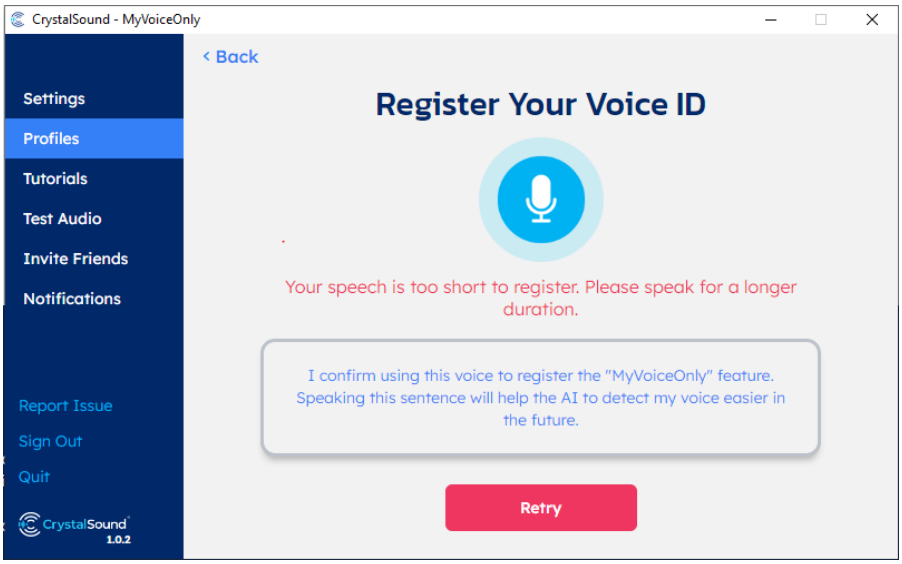


Cause: CrystalSound allows up to 5 voice profiles.

Solution:

- Delete an existing profile and register again

5. Error: Your speech is too short during voice registration



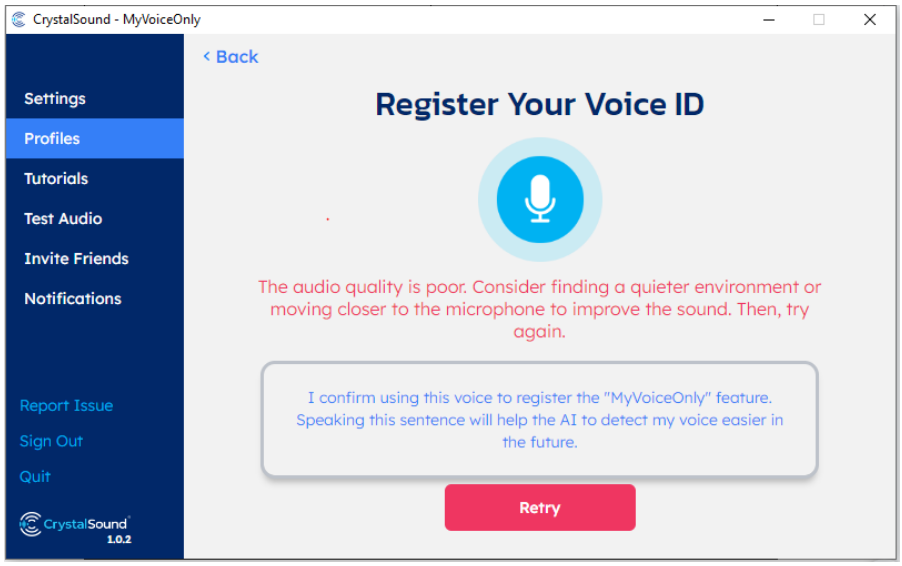
Cause: During voice registration, we were unable to hear your voice for a sufficient amount of time because:

- you spoke too little or
- you repeated the same word over and over again or
- there was too much noise in your background which prevented us from hearing you clearly.

Solution:

- Find a quieter environment, it does not need to be completely quiet but the lesser noise the better.
- Speak a long sentence for at least 5 seconds and do not say one word over and over. You may follow the prompt text for ease of voice registration but any sentence in any language is acceptable.

6. Error: Audio quality is poor



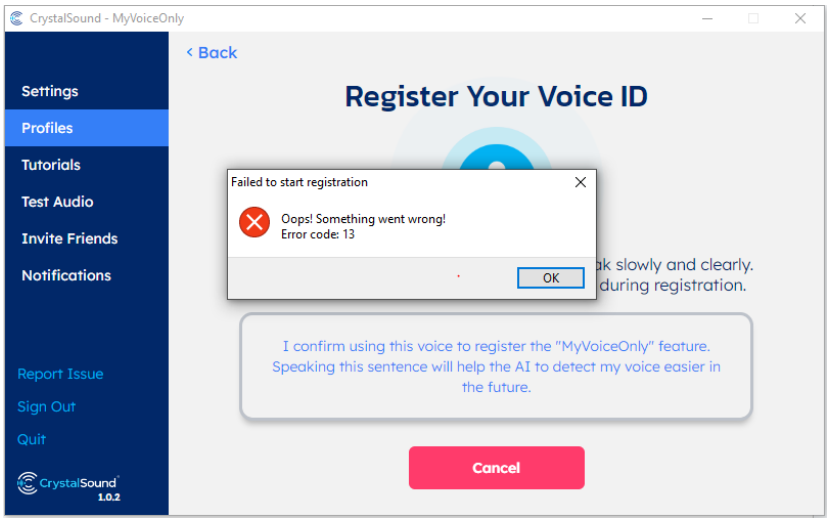
Cause: CrystalSound can learn your voice signature even if there is background noise. However, we will not be able to reliably identify your voice when:

- you unplugged your microphone or headset during voice registration
- background noise is too loud or
- you are too far from the microphone or
- your microphone has poor quality or
- there are other voices during registration.

Solution:

- Do not plug or unplug your microphone during voice registration
- If your environment is too noisy, find a quiet place for voice registration
- Make sure there is no other voice during registration
- Move closer to your microphone
- Try to record your physical microphone with an application such as Audacity to verify whether your microphone has a sound problem. If your microphone indeed has a sound problem, we may not be able to help.

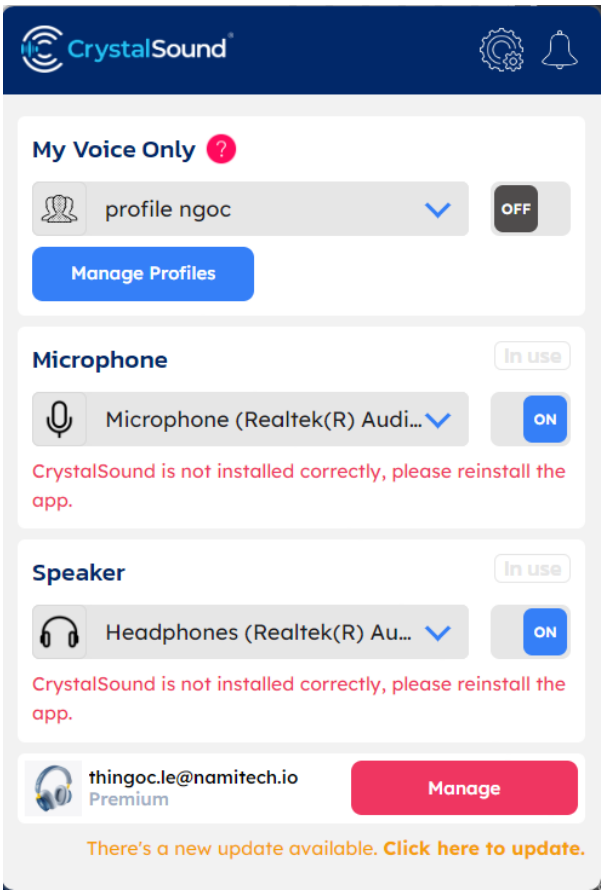
7. Error: Failed to start registration process



Cause: CrystalSound background service is busy because you pressed the Start registration button multiple times.
Solution:

- Cancel registration and try again

8. Error: CrystalSound is not installed correctly

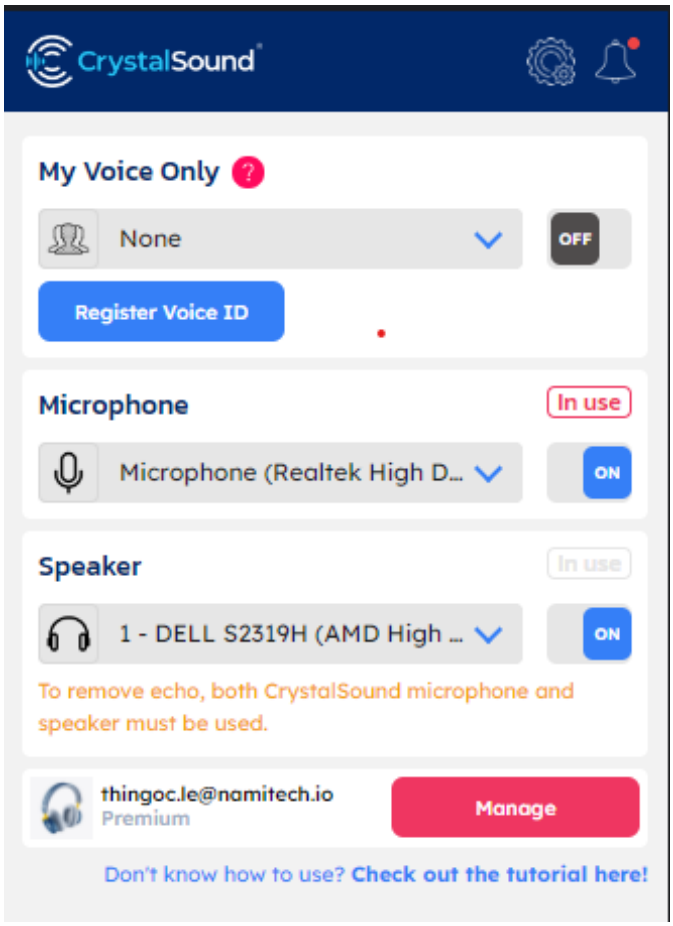


Cause: CrystalSound cannot find its virtual audio drivers. It may happen when your administrator blocked certain OS's functions that CrystalSound relied on

Solution:

- Try to reinstall CrystalSound

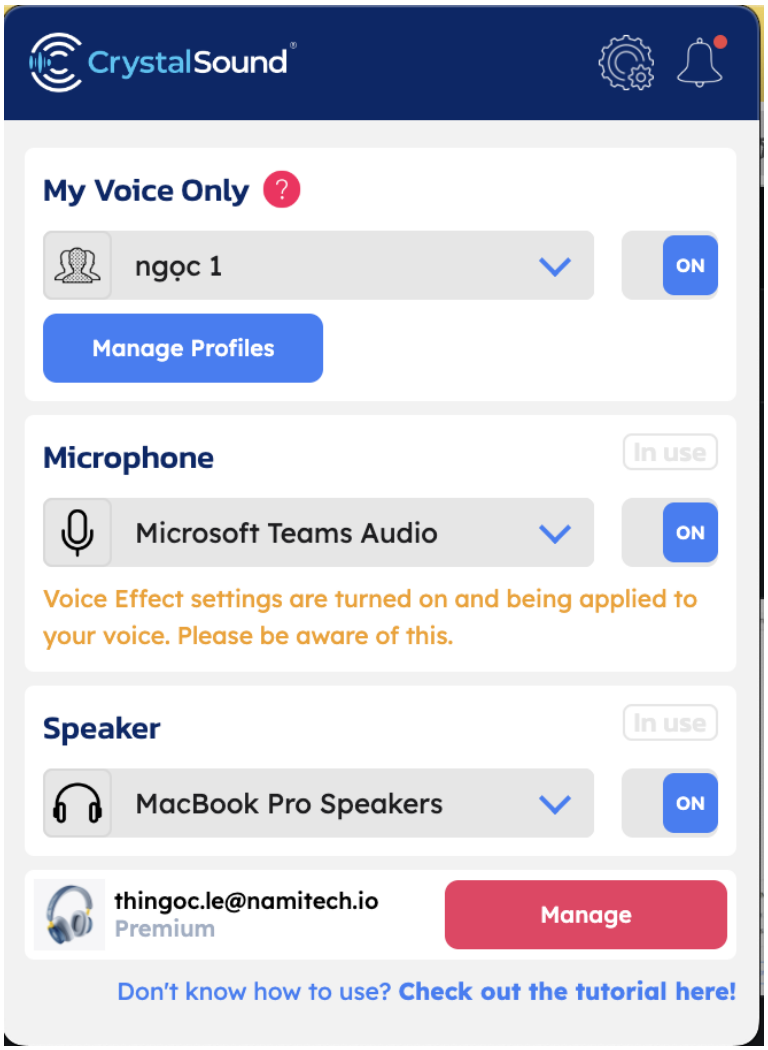
9. Warning: Echo



Cause: To remove echo, CrystalSound needs to know what audio is playing back. However, CrystalSound speaker is not in use by your VoIP application
Solution:

- Go to settings of your call application and make sure both CrystalSound and Speaker are selected

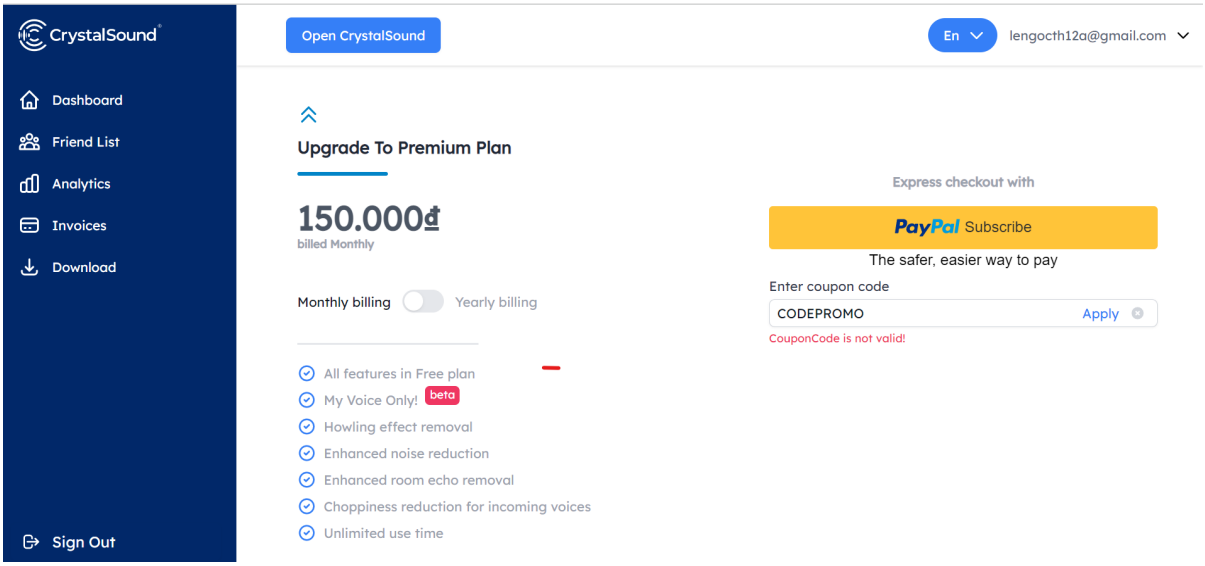
10. Warning: Voice Effects



Cause: CrystalSound currently includes three voice effects: Pitchshift, Reverb, and Robotic. While Pitchshift can make your voice manlier or more womanly, excessive value may make you sound unprofessional. Similarly, reverb and robotic effects can make your voice interesting and funny but they are not suitable for strictly professional settings.
Solution:

- Go to settings of CrystalSound and make sure pitch shift value is 0
- Go to settings of CrystalSound and uncheck reverb and robotic effect.

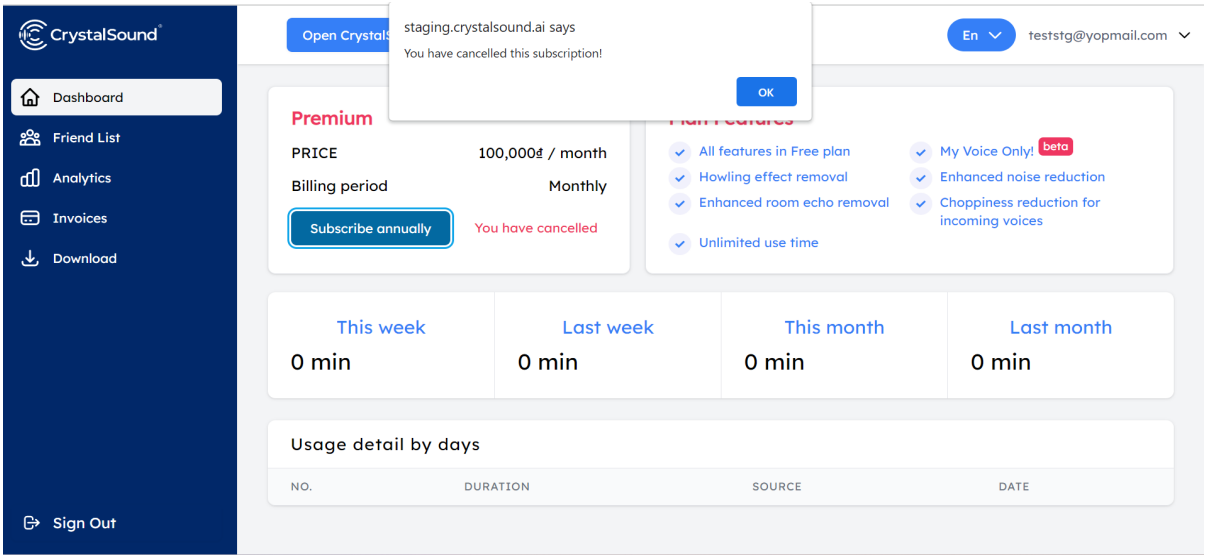
11. Error: Promo code is invalid



Cause: Your promo code or coupon is incorrect
Solution:

- Verify the promo code
- Make sure your promo code is not expired yet

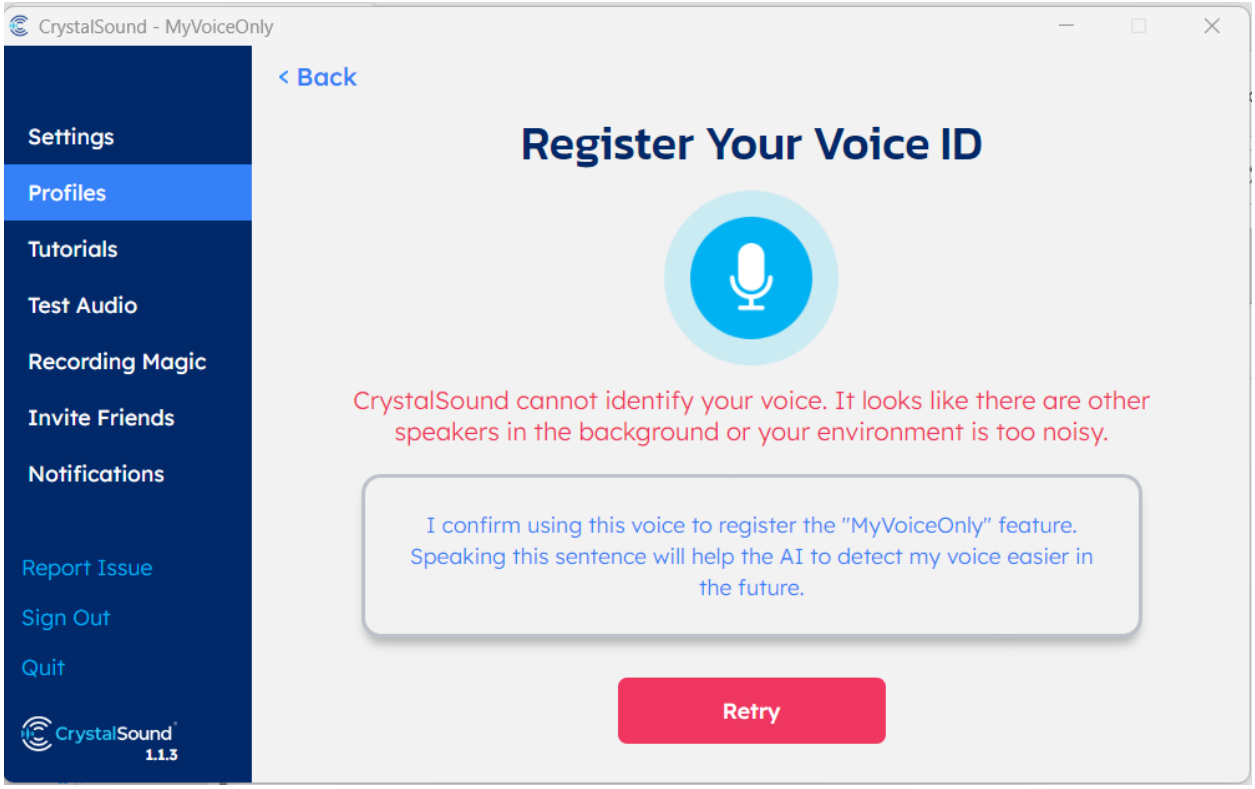
12. Error: You have canceled



Cause: You have canceled your subscription but you have already been billed for several days or months
Solution:

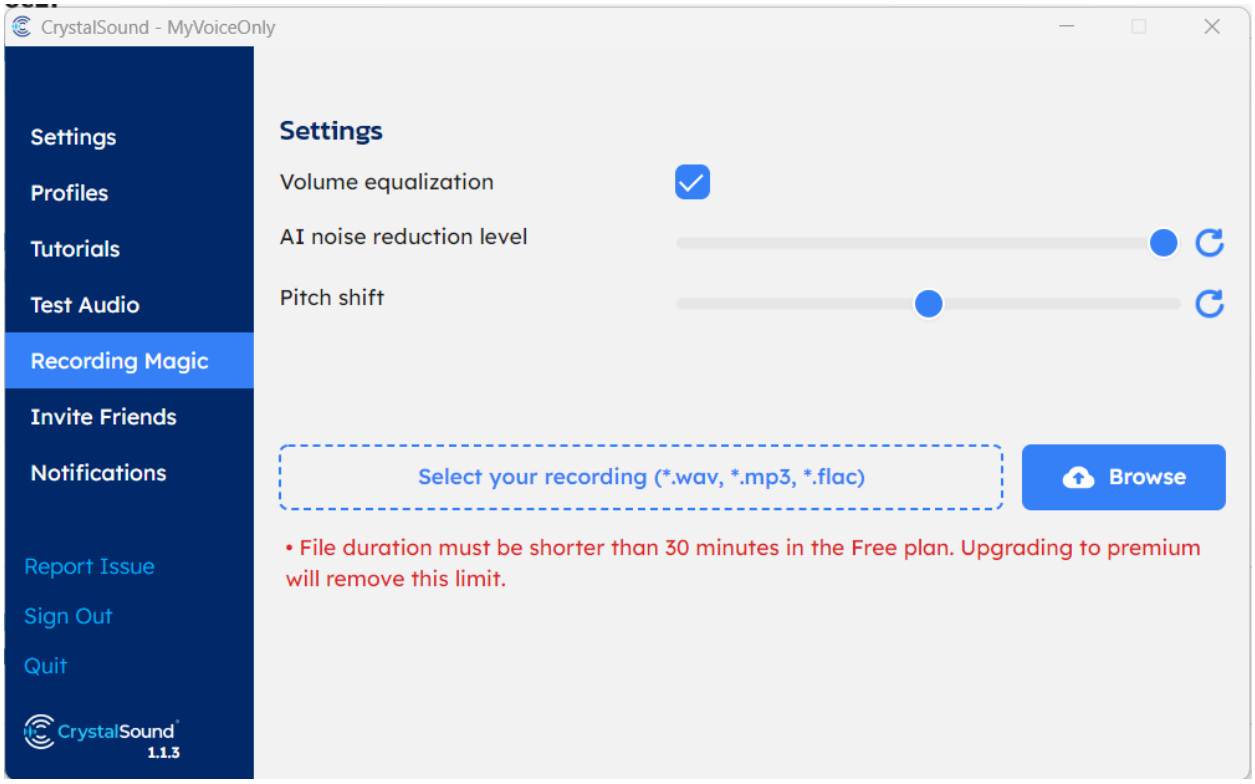
- Wait until your billing cycle ends to subscribe again.

13. Error: Can’t identify your voice.



Cause: Many people have said simultaneously or you’re in too noisy environment when registering for VoiceID.
Solution: Try to register your voiceID in a less noisy environment or when there’s no other speakers in the background.

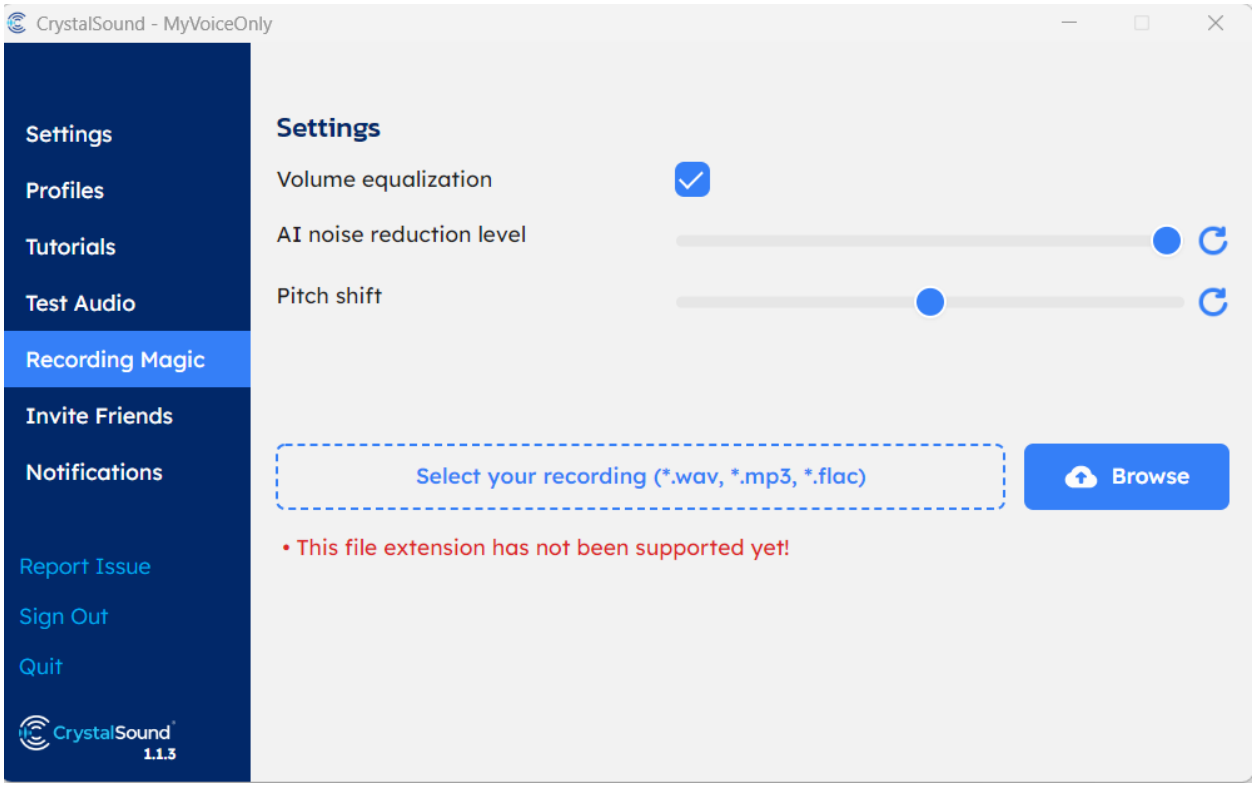
14. Recording error



Cause: It happens when you upload a recording longer than 30 minutes in a free/trial role. With the Free/Trial plan, the maximum recording length is 30 minutes. With a premium plan, there's no limit.

Solution: Upgrade to premium plan or cut the recording short by up to 30 minutes.

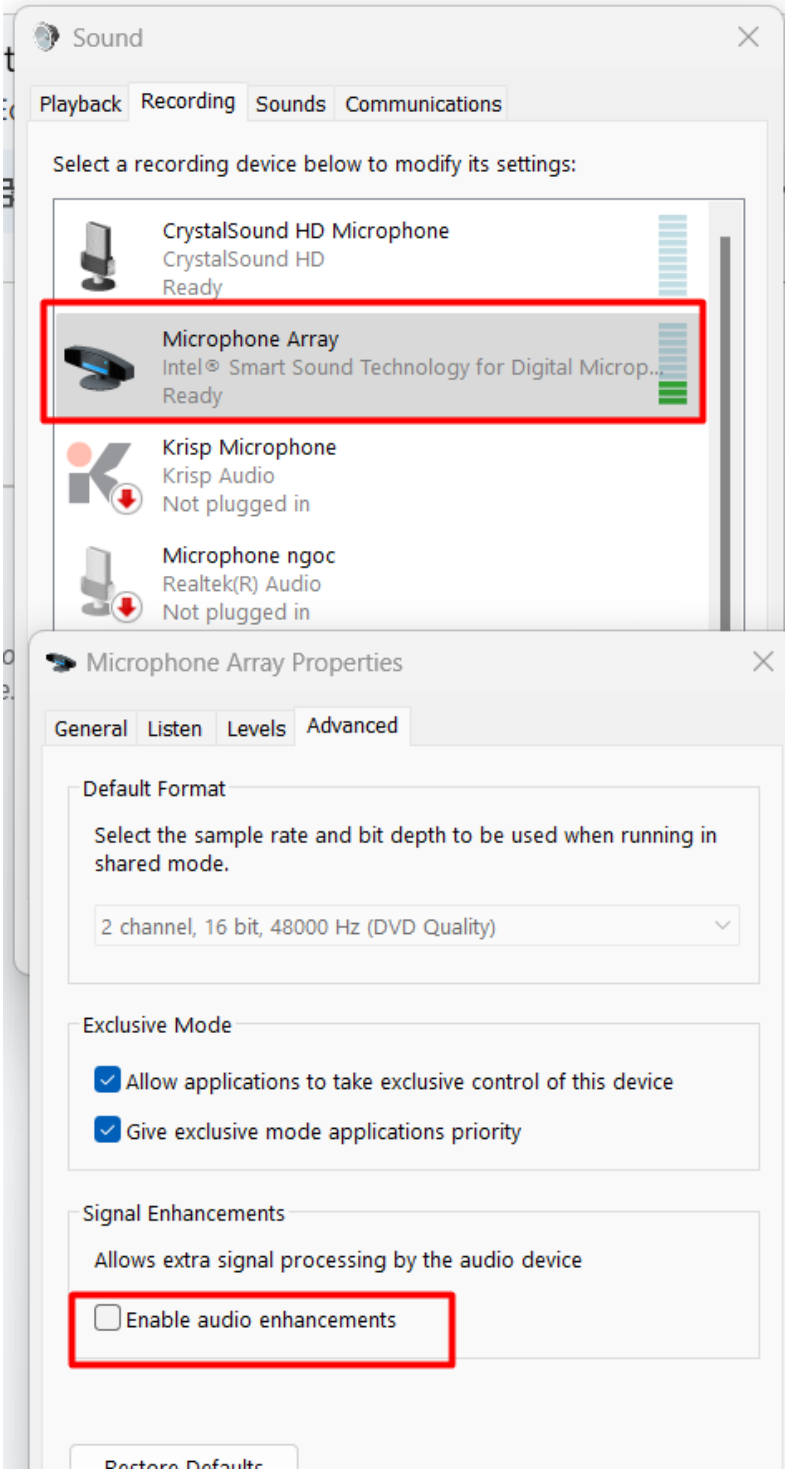
15. Error: File not supported



Cause: Uploading files in the wrong supported format. You can only upload files with extensions: *.wav, *.mp3, *.flac

Solution: Uploading file with the supported extensions.

16. Audio issue with My Voice Only

When using the CrystalSound MVO app and experiencing audio issues, such as distortion, crackling, or no sound, even when the microphone is turned on or off,

Solution: Go to Sound Settings, then navigate to the Recording tab. Select "Built-in Microphone" and uncheck the "Enable Audio Enhancements" option.