

WELCOME

Thank you for participating in our study!

This study aims at comparing the quality of recordings made using different recording methods, i.e., **H6** (professional high-quality recording device), **Awesome Voice Recorder** app on the phone, **Zoom** with default setting (the recording goes through noise-cancellation and other post-processing), **Zoom** with raw setting (keeping the unprocessed raw recordings).

We ask you to record a list of melodious sentences for use to examine the fundamental frequency contours recorded by these different devices.

DEVICE SET UP

YOUR
DESK

Zoom with 'turn on original sound'



Zoom with default setting (also used for PowerPoint)



40 – 50 cm

20-30cm

Something soft, such as a towel

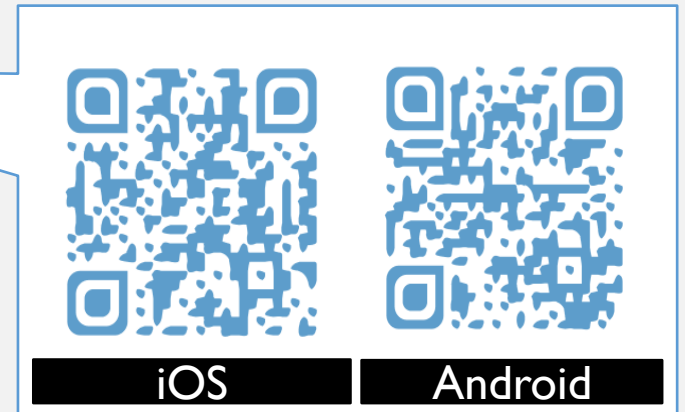


REAL-LIFE DEMO OF SET UP



DOWNLOAD & INSTALLATION ZOOM AND AVR

- Download and install Zoom on two computers **Version 5.4.9** (59931.01110) [download [here](#)] or use the installation package provided.
- Download and install Awesome Voice Recorder on your phone



Download AVR here or scan the QR code to download

AVR for android:

<https://play.google.com/store/apps/details?id=com.newkline.avrx>

AVR for iOS (the free version):

<https://apps.apple.com/us/app/awesome-voice-recorder/id892208399>

SETTING UP ZOOM (DEFAULT - ON THE RIGHT)

- Use the default setting for Zoom (as you would use in a normal meeting, without adjusting any settings)
- Start a meeting with your zoom account (check if recording is enabled)
- If you do not have a record button, you can log in this account:
 - Username: xxxx@gmail.com
 - Password: xxxx

Note: use the computer-internal mic to record.

Note: use the Zoom default computer to view this PowerPoint presentation.

SETTING UP ZOOM (RAW - ON THE LEFT)

- Go to “Settings – Audio”

1. Tick

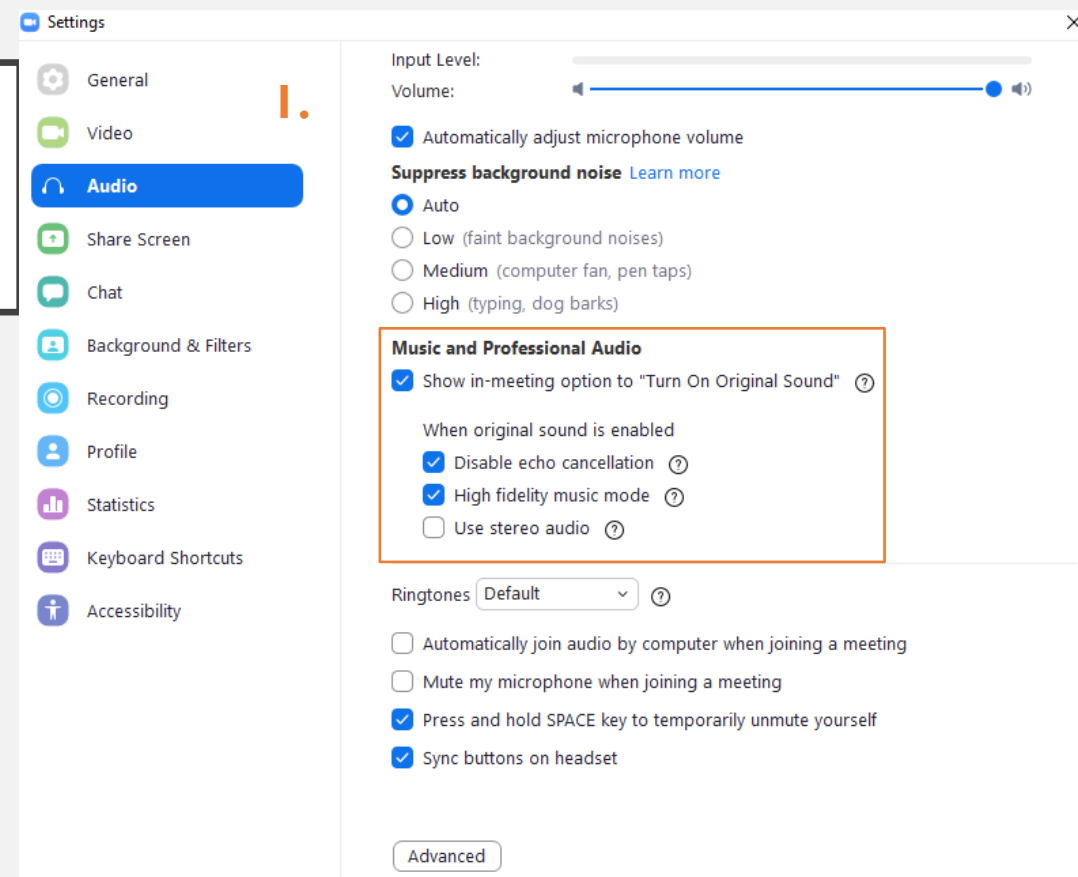
- ✓ “Show in-meeting option to ‘Turn On Original Sound’”
- ✓ “Disable echo cancellation”
- ✓ “High fidelity music mode”

2. Press the button ‘Advanced’ at the bottom

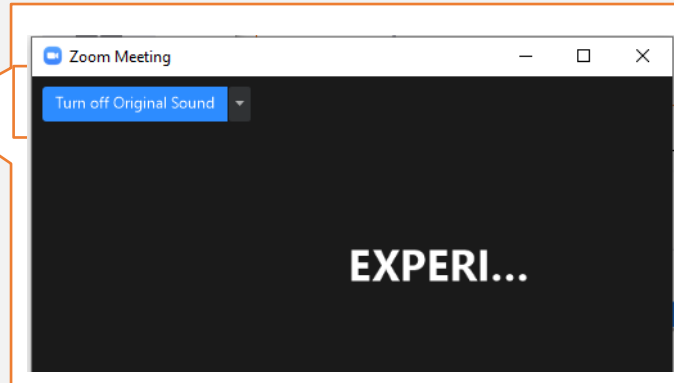
- In ‘Signal processing by Windows audio device drivers’, choose “Off (Windows – Raw)”

3. Start a meeting with your zoom account (check if recording is enabled)

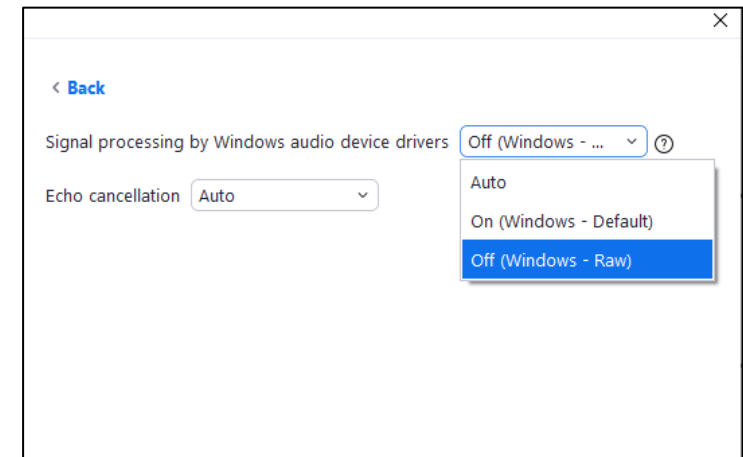
- Remember to press ‘Turn On Original Sound’
- If you do not have an account that you can record with, you can log in this account:
 - Username: xxxx@gmail.com
 - Password: xxxx
- **Note:** use the computer-internal mic to record.




3.



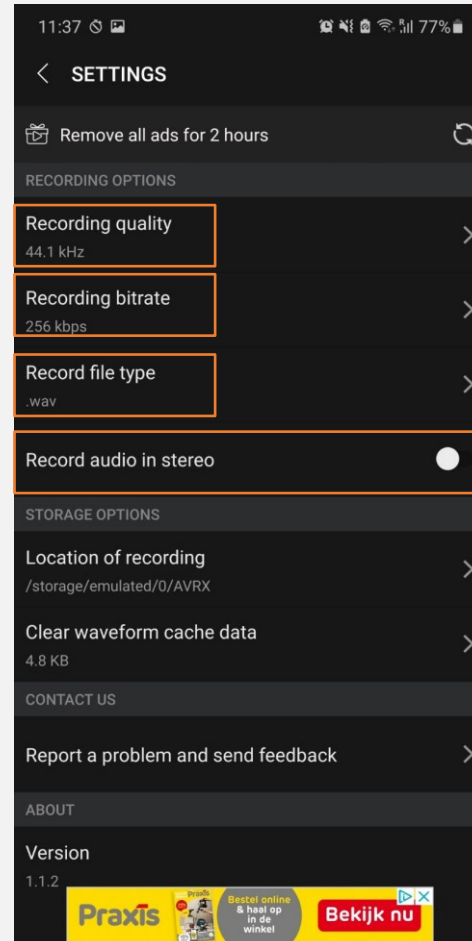
2.



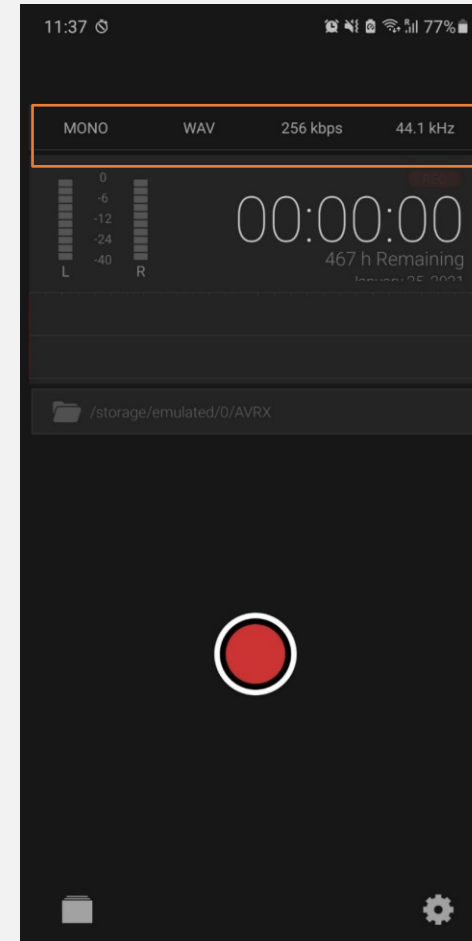
SETTING UP AVR

- Open the AVR app.
- Click on the settings button 
- Scroll down to Recording options.
- Adjust the settings as follows:
 - Recording quality: 44,1 kHz
 - Recording bitrate: 256kbps
 - Record file type: .wav
 - Record audio in stereo: off (i.e., record in mono)
- Leave other settings as they are.
- Return to the main recording screen.
- Note: settings will remain the same the next time you open the app.

Android settings screen

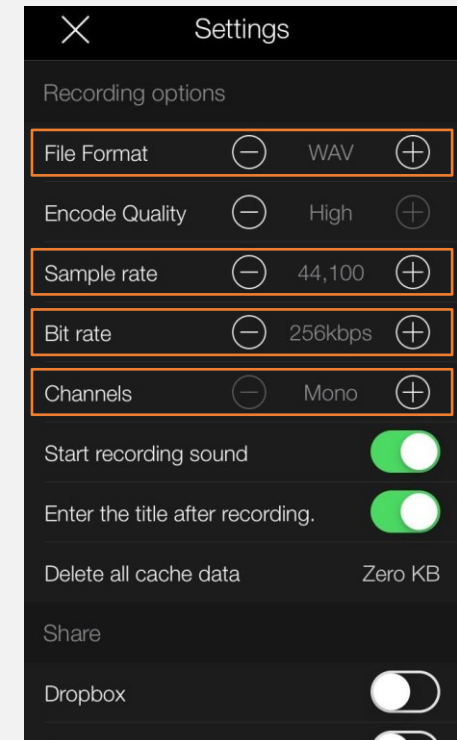


Android main recording screen



iOS settings screen

Note: the selected options do not display on the main recording screen



SETTING UP HEADSET MIC FOR H6

- There are three steps to preparing the mic.

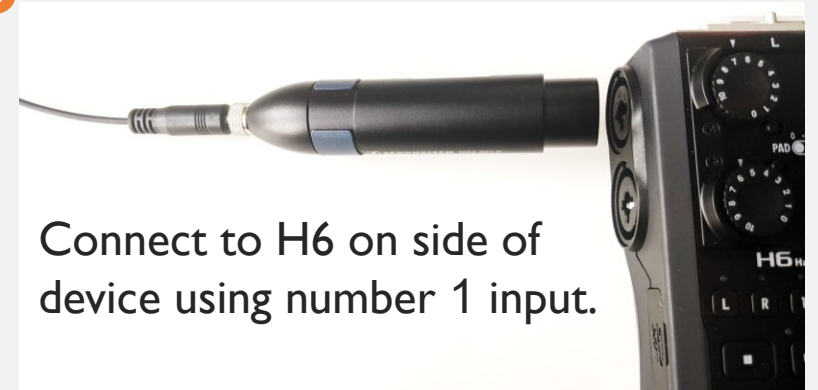
1 Connect the cable to the headset. It will look like this once connected.



2 Connect headset to the adaptor.



3



SETTING UP H6

- Turn on H6 (left side of device – hold down until screen is on)
- Check recording settings: 44.1kHz/24 (displayed here)
- If these are not correct, go to
 1. Press the Menu button
 2. Select **REC** (third list option; scroll with scroll button, press scroll button to select)
 3. Select **Rec Format**
 4. Select **WAV44.1kHz/24bit**
 5. Press the Menu to return to home screen
- Ensure “phantom power” is on for your input mic
 1. Press the Menu button
 2. Select **INPUT&OUTPUT** (second list option)
 3. Select **Phantom**
 4. Select **On/Off**
 5. Select **All**
 6. Select **On**
 7. Press the Menu to return to home screen

This tells you if the phantom power is on, but not for which inputs



Menu button

Scroll button

PREPARING TO RECORD WITH H6

- Select the track to record—press the square button that says number “1”, to match the mic input
- The red light will be on above the track when it’s selected.



- Set the levels using the Number 1 dial.
- You need to wear the headset while you set the level for yourself.
- When you talk normally, the level should be at around -12 dB.
- Test this by e.g., explaining what you had for breakfast and adjust the dial up or down so that the level peaks, on average, around -12 dB.

Remember the recording levels need to be set again for each person so that the input level is always around -12 dB for that person.



RECORDING WITH H6

- To start recording, press the record button (red circle).
- The screen will show the numbers counting up when it is recording, and they will be red, and a red light will be on beside the recording button.



TASK

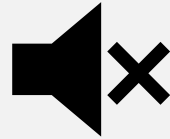
- You will see one utterance on each slide with an audio demonstration. Please try your best to imitate the intonation in the demo.
- There will be 5 utterances in total, and each utterance will appear three times in random order.
- The content in brackets is the context of these utterances, and it displayed so that you understand how the utterances should be said. Don't say the content in the brackets.
- Please play the demo audio first, then clap before you say each sentence, and leave one second after you clap.
- You can play the demo as many times as you want, but please say each utterance in a fluent manner (without fillers, pauses, coughs, laughs, tapping, mouse clicking, etc.)
- Before you start, you will be asked to give verbal consent for the recording.

ALL UTTERANCES

This is an overview. You don't need to say them now.

- 1) (Is this even food?! It's inedible!)
My ramen aren't inedible!
- 2) (What did Emmanuel make for the bake sale?)
Emmanuel made the banana bread.
- 3) (Take as many mangoes as you want! I've got a free supply for a year!)
Free mangoes for a whole year?!
- 4) (*It's dinner time. You have finished cooking.*)
Amelia! Your noodles are ready!
- 5) (Did you eat your stew?)
Do you mean my goulash? It's a soup you know.

PLEASE SWITCH YOUR PHONE AND
COMPUTERS TO SILENT MODE.



READY?

- Check again whether the zoom computer on the left has the option 'Turn on Original Sound' on (it's on when it's blue)

START RECORDING ON ALL FOUR DEVICES

- Start recording on all four devices.
- Present this PowerPoint fullscreen on the Zoom default device.



[Clap!]

- Say:
 - “This is [your initials], making recordings for the SPRINT project.
 - The date is [the date].
 - I understand this recording will be used for a production study and my data will be fully anonymised and will only be shared for research purposes.
 - I consent to take part in this study.”



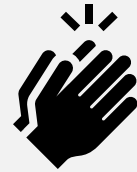
[Clap!]



Pause for one second

(Is this even food?! It's inedible!)

My ramen aren't inedible!



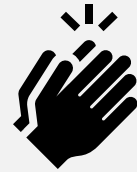
[Clap!]



Pause for one second

(What did Emmanuel make for the bake sale?)

Emmanuel made the banana bread.



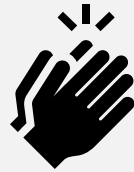
[Clap!]



Pause for one second

(Take as many mangoes as you want! I've got a free supply for a year!)

Free mangoes for a whole year?!



[Clap!]



Pause for one second

(It's dinner time. You have finished cooking.)

Amelia! Your noodles are ready!



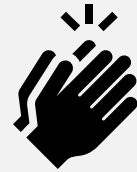
[Clap!]



Pause for one second

(Did you eat your stew?)

Do you mean my goulash? It's a soup you know.



[Clap!]



Pause for one second

(What did Emmanuel make for the bake sale?)

Emmanuel made the banana bread.



[Clap!]



Pause for one second

(Is this even food?! It's inedible!)

My ramen aren't inedible!



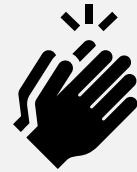
[Clap!]



Pause for one second

(It's dinner time. You have finished cooking.)

Amelia! Your noodles are ready!



[Clap!]



Pause for one second

(Take as many mangoes as you want! I've got a free supply for a year!)

Free mangoes for a whole year?!



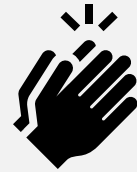
[Clap!]



Pause for one second

(Did you eat your stew?)

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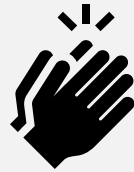
[Clap!]



Pause for one second

(Take as many mangoes as you want! I've got a free supply for a year!)

Free mangoes for a whole year?!



[Clap!]



Pause for one second

(Is this even food?! It's inedible!)

My ramen aren't inedible!



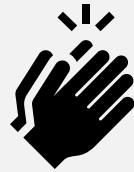
[Clap!]



Pause for one second

(It's dinner time. You have finished cooking.)

Amelia! Your noodles are ready!



[Clap!]



Pause for one second

(What did Emmanuel make for the bake sale?)

Emmanuel made the banana bread.



[Clap!]



Pause for one second

(Did you eat your stew?)

Do you mean my goulash? It's a soup you know.

ENDING THE RECORDING

- Stop recording on each device.
 - Zoom meetings:
 - Select “Stop recording” in each meeting.
 - You will have to leave the Zoom meetings for the files to save.
 - AVR
 - Android: Press the white square to stop the recording
 - iOS: Press the grey square to stop the recording (you may be given an option to name the file)
 - H6
 - Press the stop button (white square).

GETTING FILES OFF H6

- It is possible to get files from the H6 in two ways:

Make sure you have stopped the recording and have turned off the device.

1. Eject the SD card and insert it (or mini SD card) into your computer.
2. Plug the device into your computer using a USB connection.

For option 1, to remove the SD card, flip open covering on the left side of the device, gently press in the SD card to pop it out.

For option 2, use supplied cable, connect to USB jack on the right side of the device, connect to your computer and search as though it is a storage device.

You will need to turn the H6 off and on again and choose the first option so that it shows up on your computer.

Note, there will be many folders. Your recording is likely in the first folder.

IF YOU HAVE TROUBLE PACKING H6
BACK INTO ITS BOX...



SENDING FILES BACK

- For files from all devices, please name each file: Intials_Device.wav
 - e.g. 'AB_AVR.wav' (i.e. recording using phone app), 'AB_H6.wav', 'AB_Zoom-default.m4a' (recording using default settings, computer on the right); 'AB_Zoom-raw.m4a' (recording using original sound setting, computer on the left).
- Please fill in the “participant_info.xlsx” with participant and device information
- Please send all files (1 excel file + 4 recordings per person) to xxx@xxx or contact xxx for other file transfer options.