

Instructions for Programming New Cards for AAC Device

What you need:

- Computer



- MicroSD Card Reader



- NFC Card



- Smartphone



- NFC Tools App (On Phone)

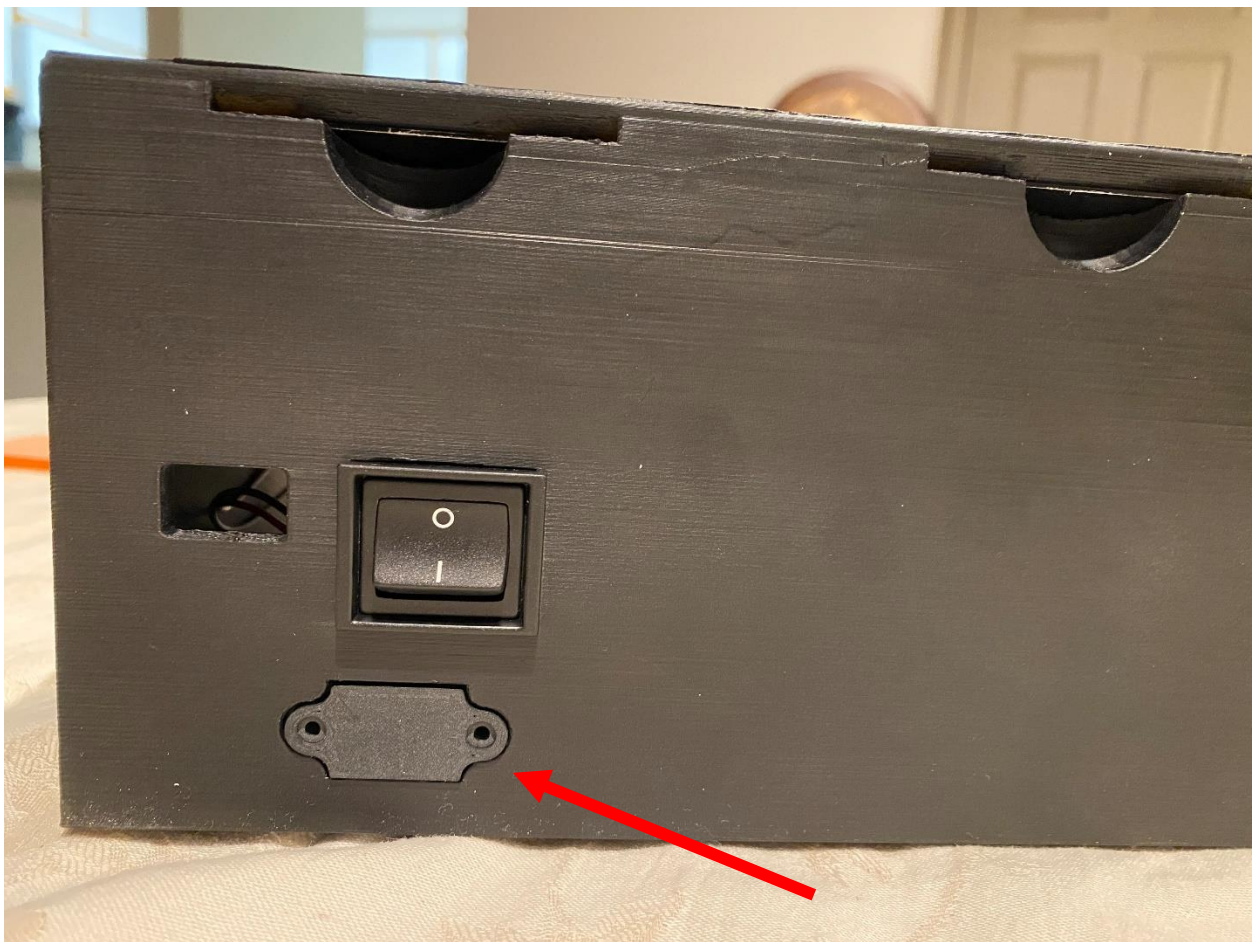


- Audacity (Downloaded on computer)
 - [Audacity Download Link](#)
- Small screwdriver

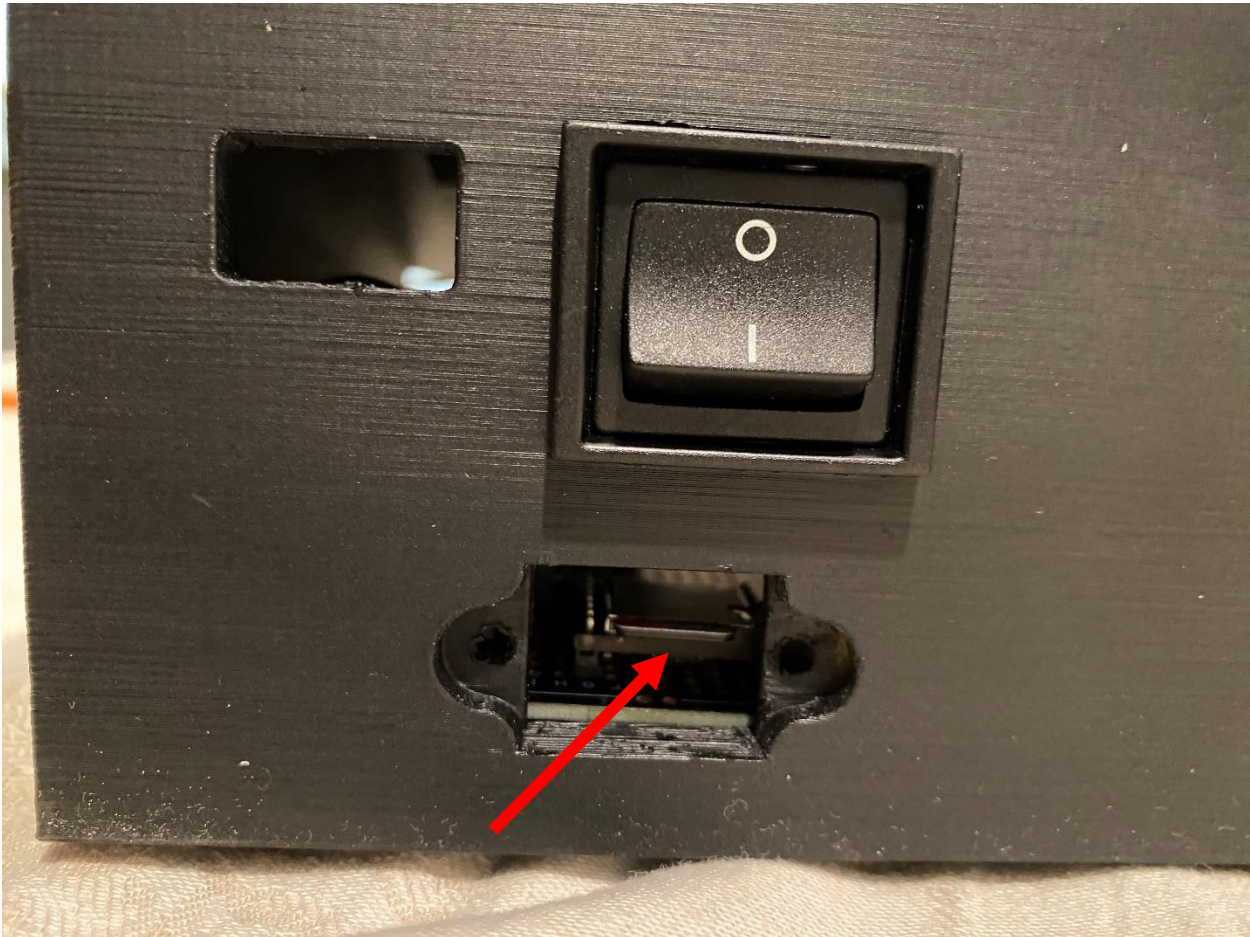
Directions:

Programing the Sound Recordings

1. Unscrew the small plate cover on the back of the AAC box.



2. Remove the microSD card with tweezers. (Push the SD card towards the front of the box till you hear a click then you should be able to remove freely with tweezers.)





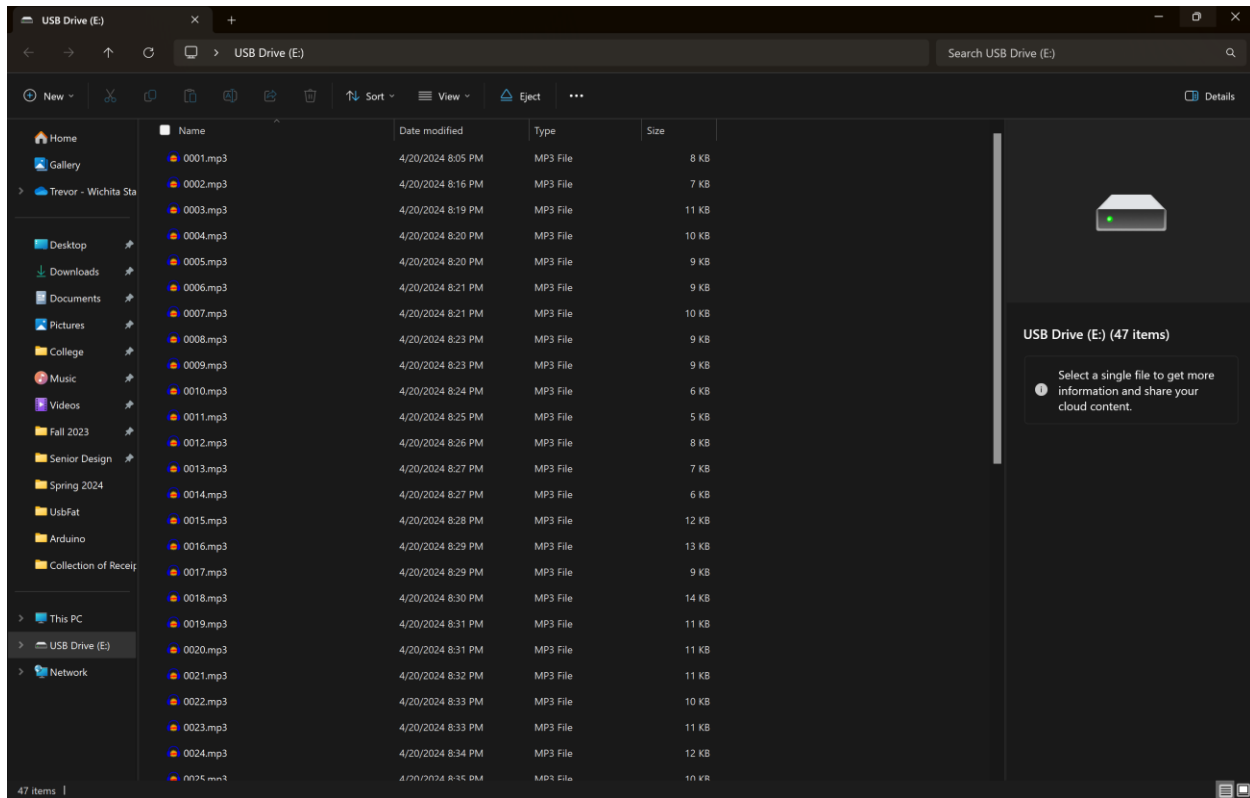


3. Insert the microSD card into your computer using the microSD card adapter.




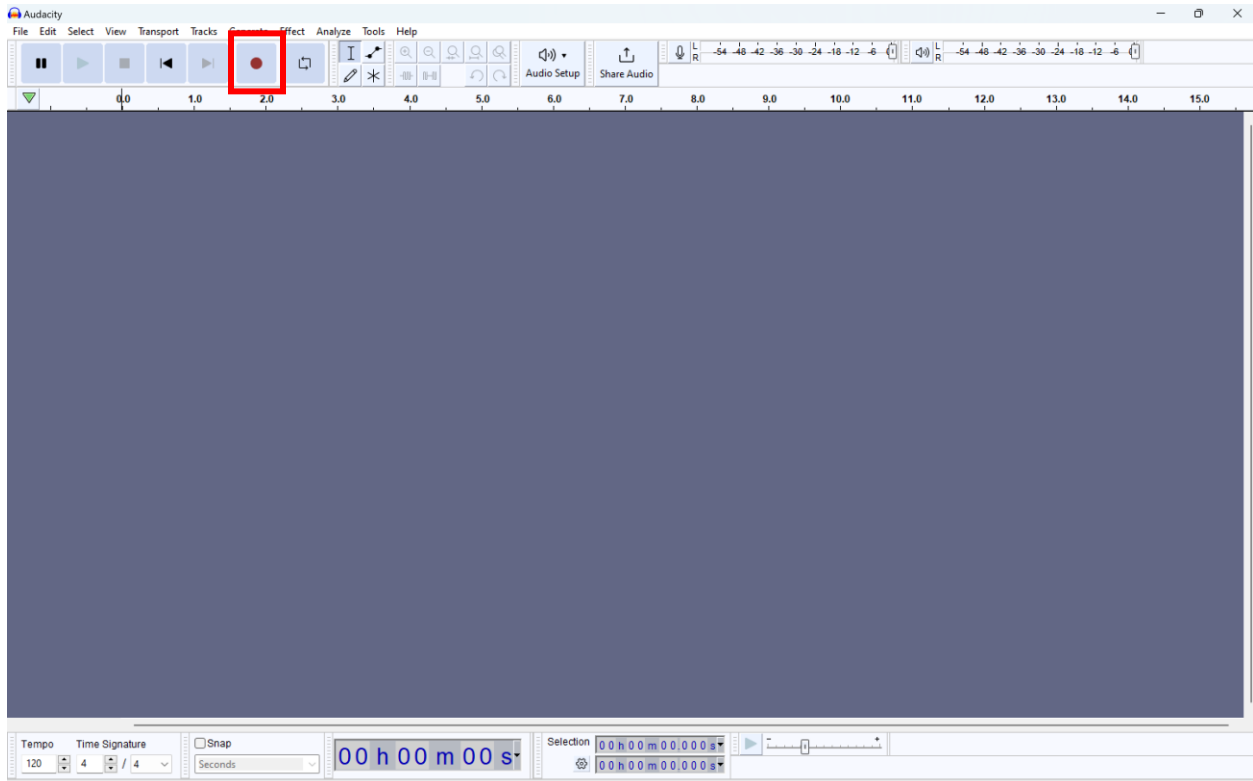


4. Open the microSD card. There should be a bunch of mp3 files on the SD card like the image seen below.

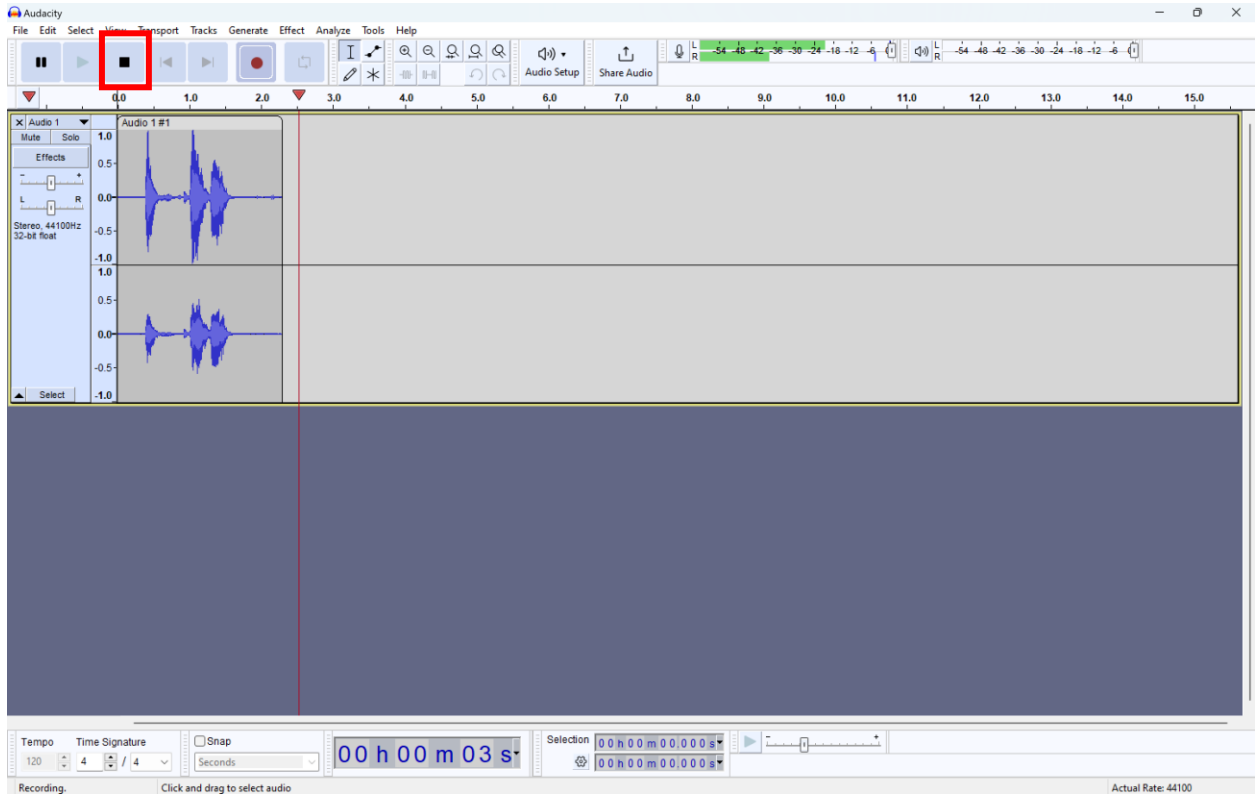


5. Open Audacity on your computer.

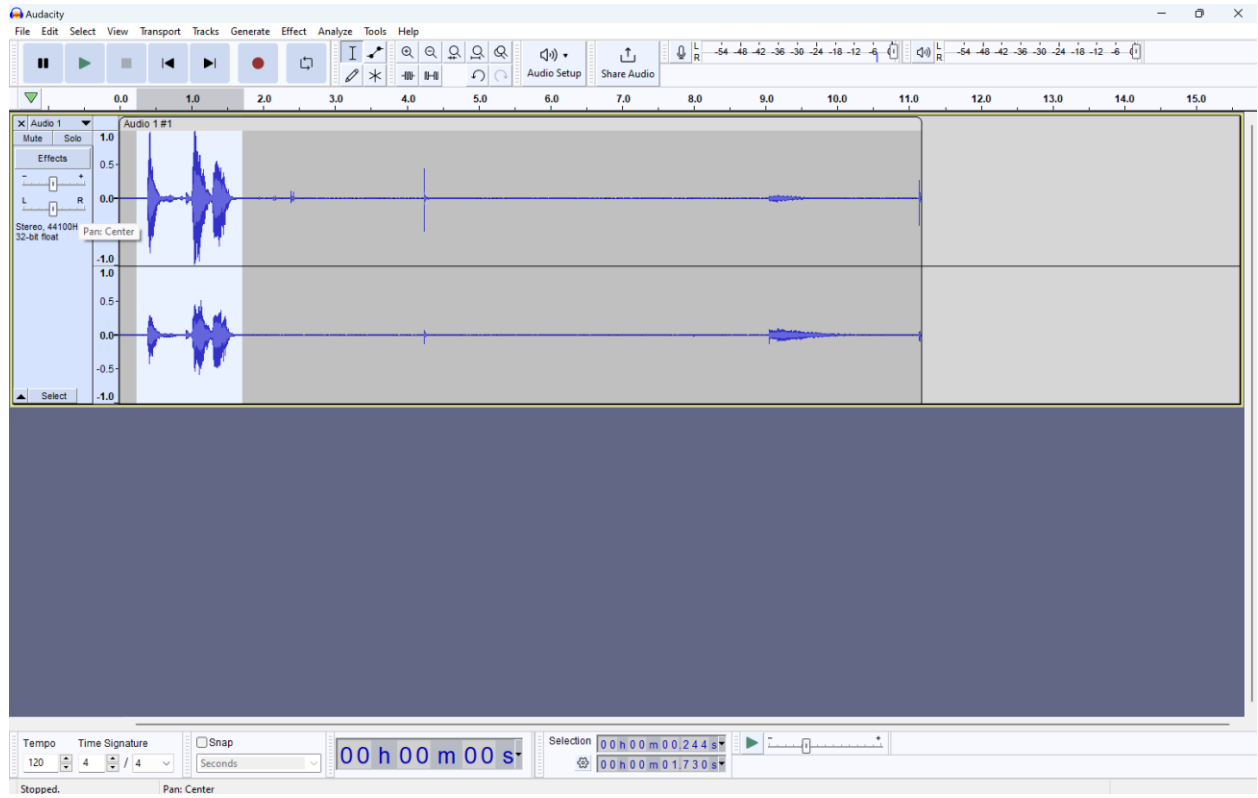
6. Click the recording button  in the top left to begin recording a sound.




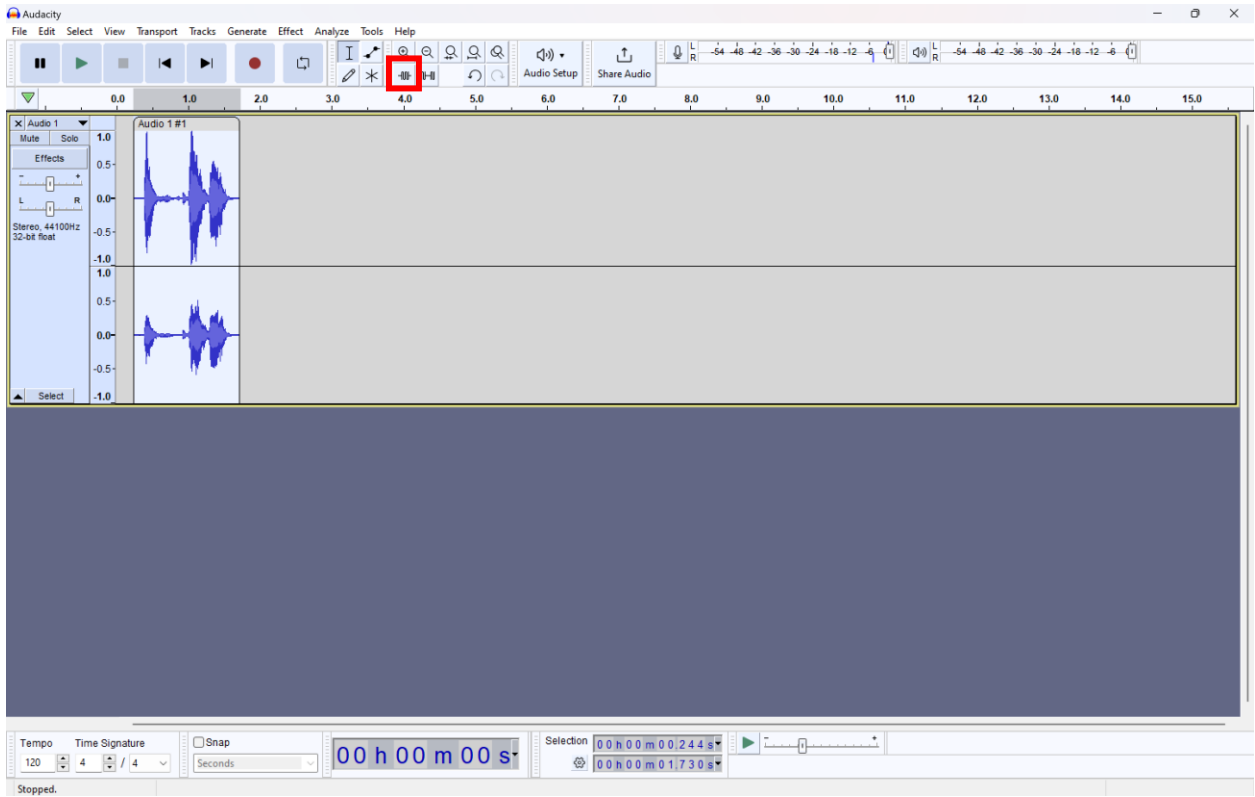
7. Click the stop button  when finished recording.



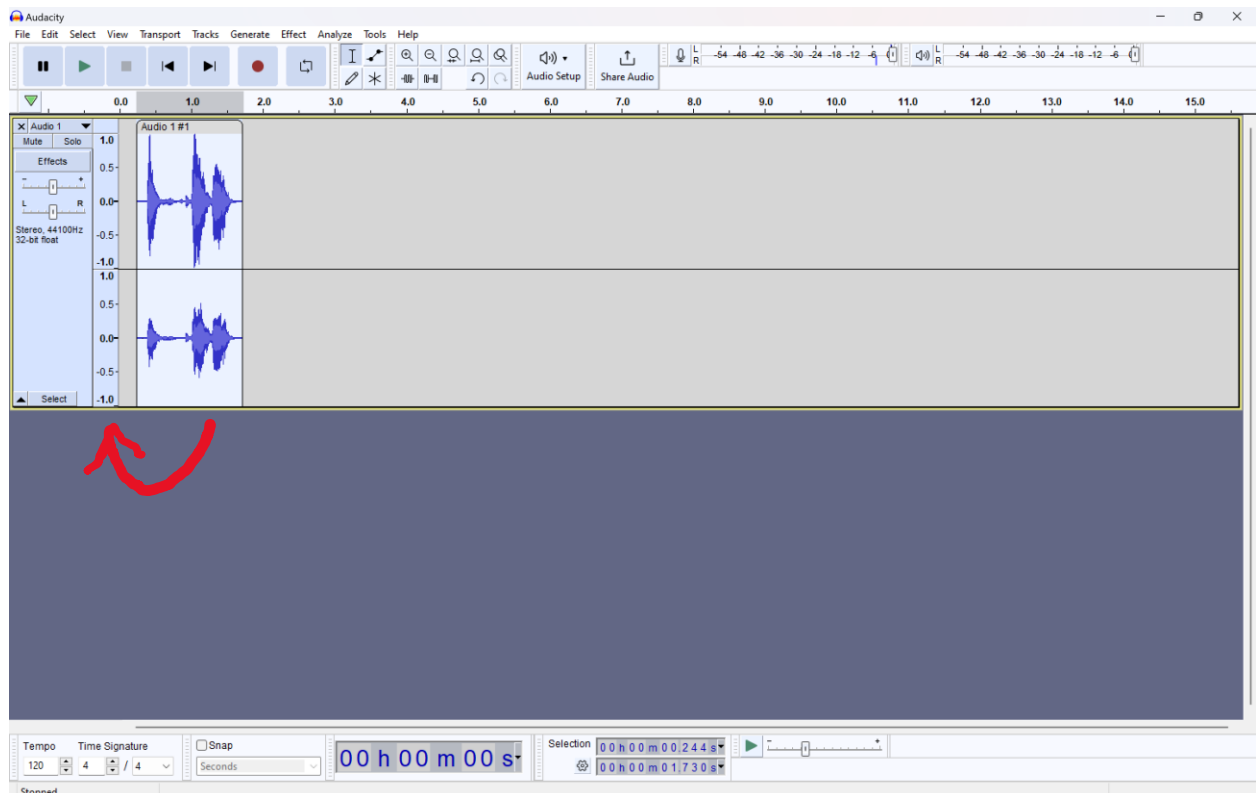
8. Highlight the portion of the recording you would like to use for the card (This will most likely be the portion with the audio spikes).



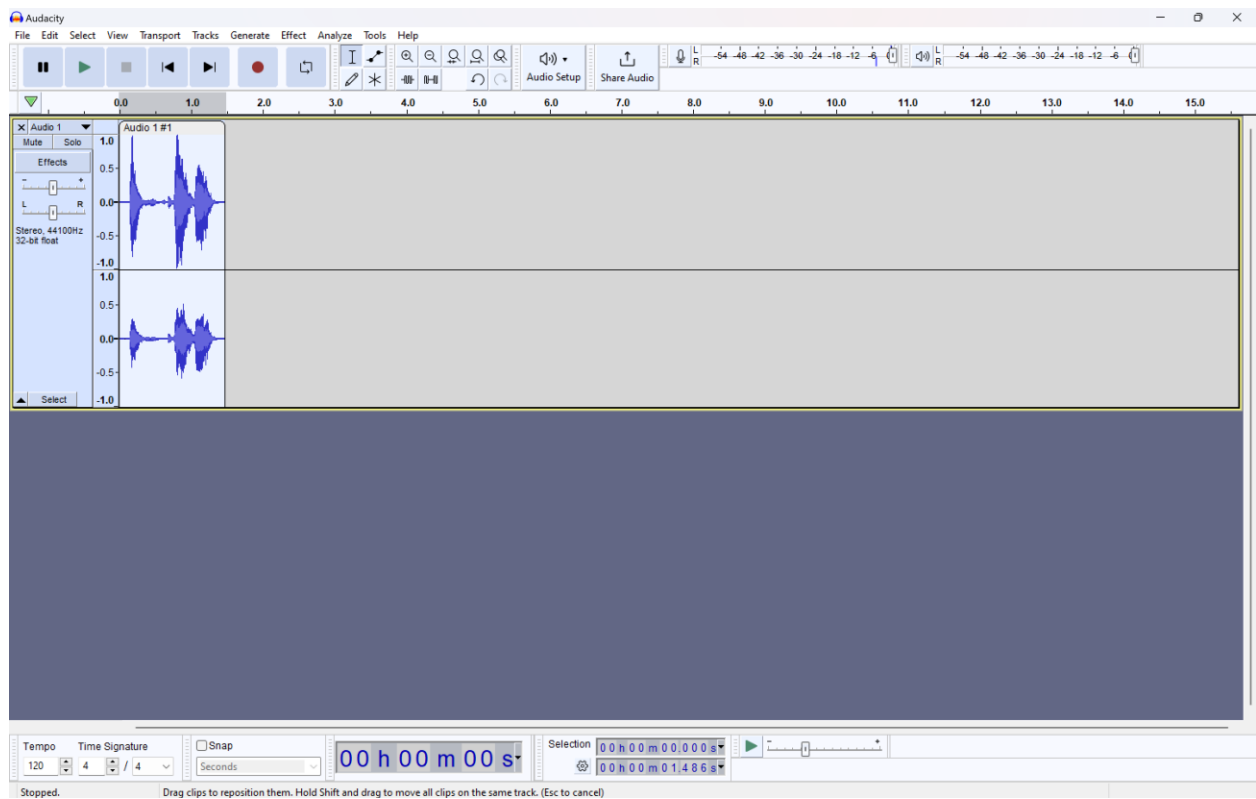
9. Select the trim button  to remove the unneeded portions of the audio clip.



10. Drag the audio clip to the beginning of the recording (the 0.0 mark).

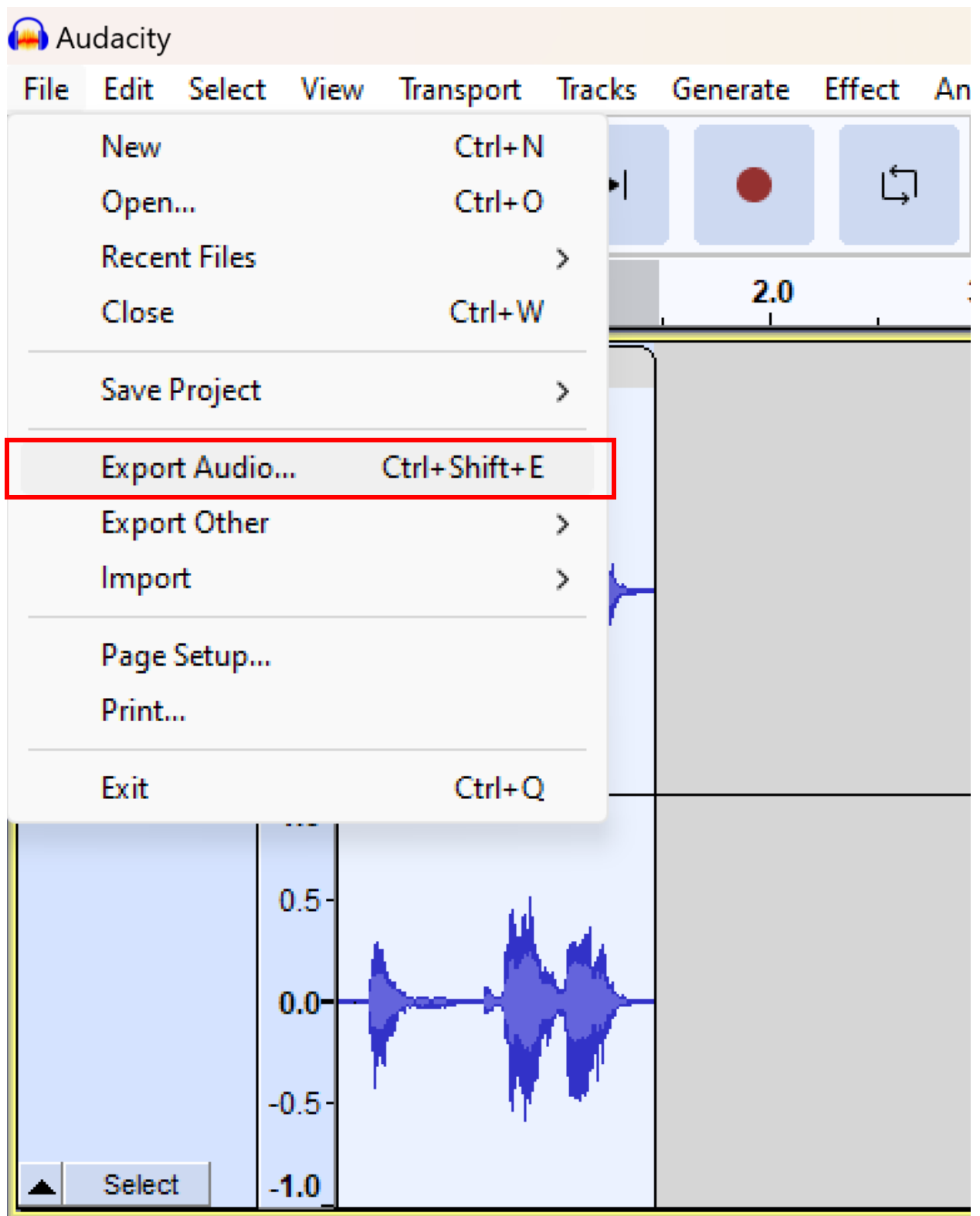


The screenshot shows the Audacity interface with a single audio track named 'Audio 1 #1'. The track contains a blue audio waveform. A red arrow points from the waveform to the 0.0 mark on the timeline, indicating the action of dragging the clip to the beginning of the recording. The timeline is marked from 0.0 to 15.0 seconds. The status bar at the bottom shows 'Stopped' and a selection range of 00 h 00 m 00 s.



The screenshot shows the Audacity interface with the same audio track 'Audio 1 #1'. The audio waveform is now positioned at the 0.0 mark on the timeline. The status bar at the bottom shows 'Stopped' and a selection range of 00 h 00 m 00 s. A small text box at the bottom of the window reads: 'Drag clips to reposition them. Hold Shift and drag to move all clips on the same track. (Esc to cancel)'.

11. Click on File-> Export Audio.



- Export the recording to the root of your microSD card by selecting “Browse” on the “Folder:” line. Make sure the “Format:” selected is MP3 Files and name the recording the next sequential number on the microSD card. If the number is less than four digits large, fill the beginning with zeros. Then select “Export.”

EX: The next number on the microSD card is 46, so we save the recording as -> 0046.

The screenshot shows the 'Export Audio' dialog box. The 'File Name' field contains '0046.mp3'. The 'Folder' field contains 'E:\' and has a 'Browse...' button to its right. The 'Format' dropdown menu is set to 'MP3 Files'. Below these is the 'Audio options' section, which includes radio buttons for 'Channels' (Mono, Stereo, Custom mapping), with 'Stereo' selected. There is a 'Configure' button next to the radio buttons. Below the radio buttons are three dropdown menus: 'Sample Rate' (44100 Hz), 'Bit Rate Mode' (Preset), and 'Quality' (Standard, 170-210 kbps). Below the 'Audio options' section is the 'Export Range' section with radio buttons for 'Entire Project' (selected), 'Multiple Files', and 'Current selection'. There is also a checkbox for 'Trim blank space before first clip' which is unchecked. At the bottom of the dialog are three buttons: 'Edit Metadata...', 'Cancel', and 'Export'.

- Once finished, eject the microSD card from your computer.
- Insert the microSD back into the AAC box using the tweezers. (Push the microSD card into the slot till a click is heard).



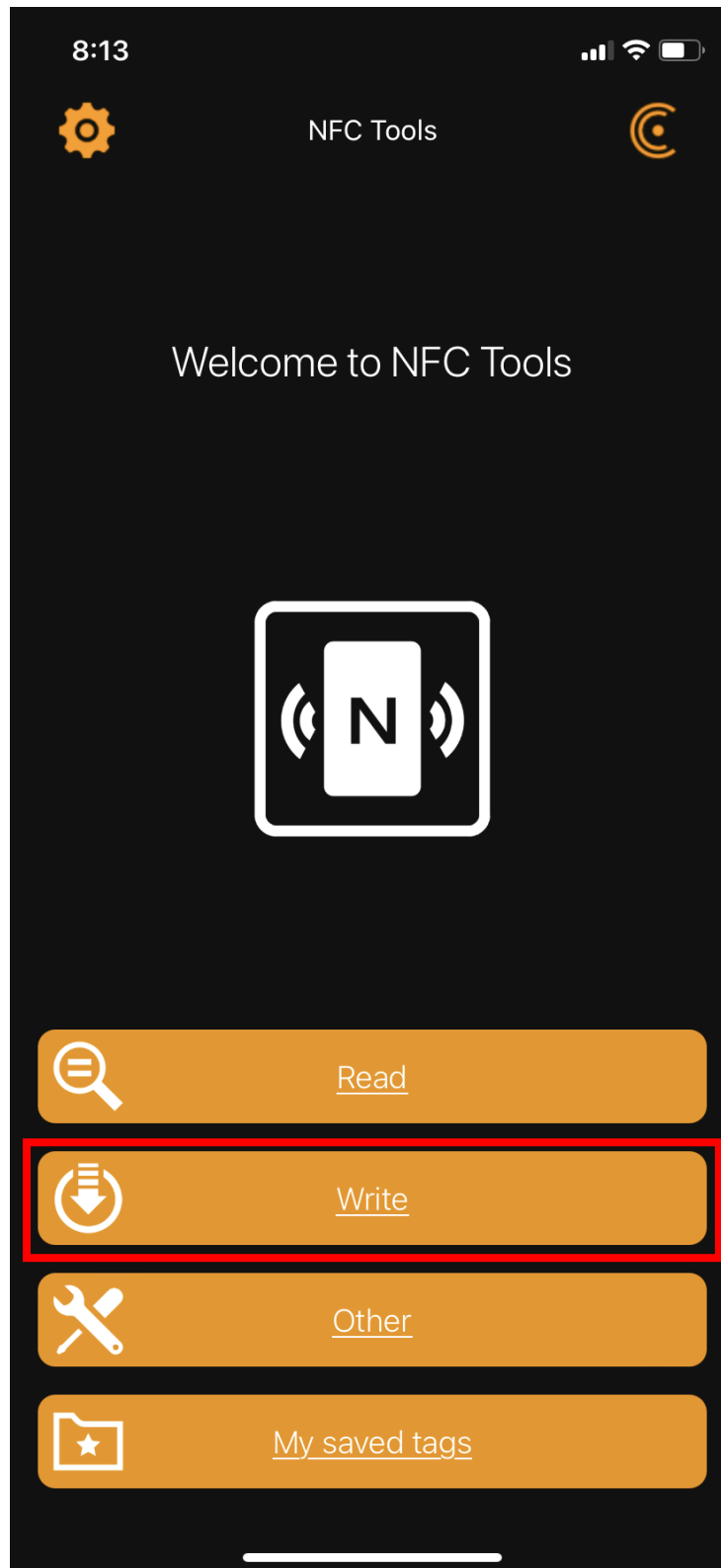
15. Screw the small plate cover back on to the AAC box.

Programing the NFC Card

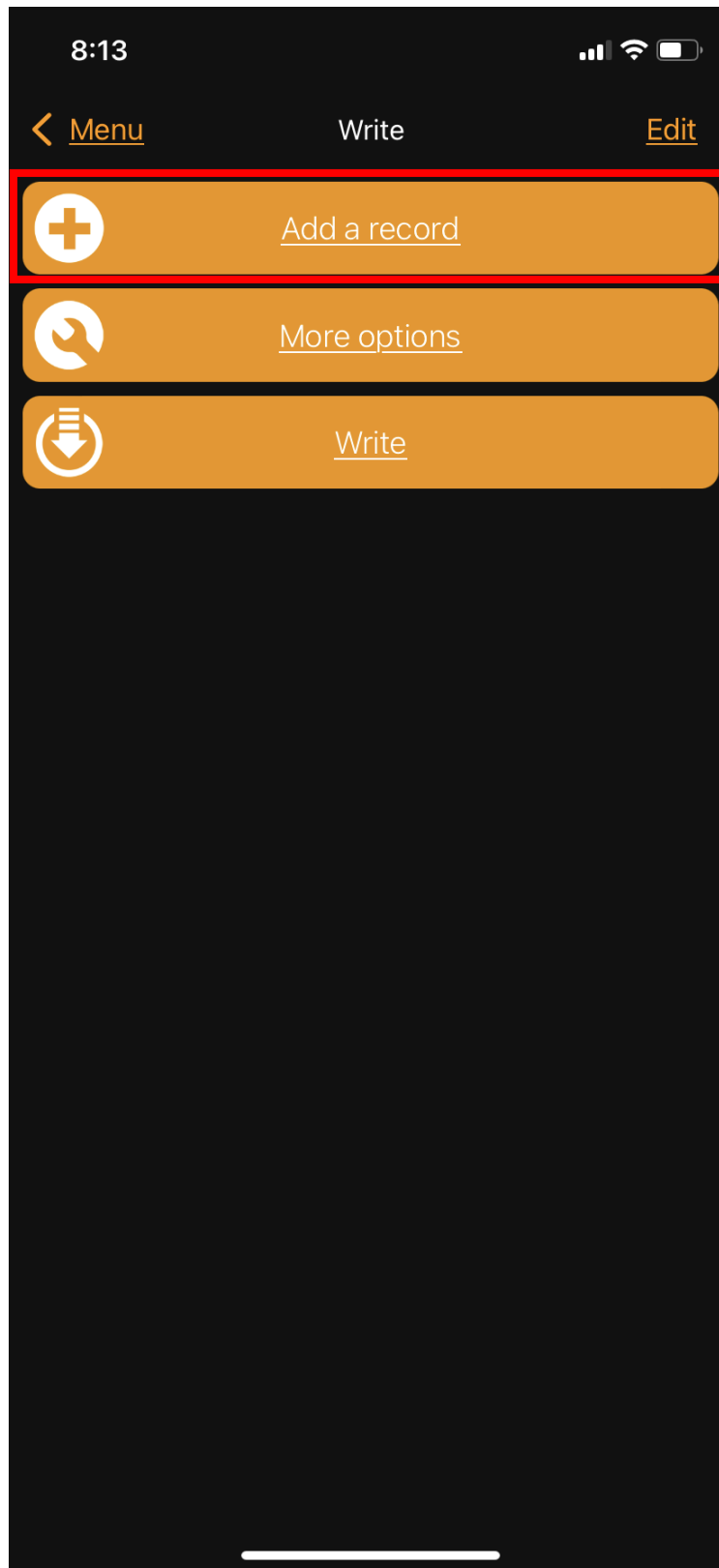
1. Open the NFC Tools app on your smartphone.



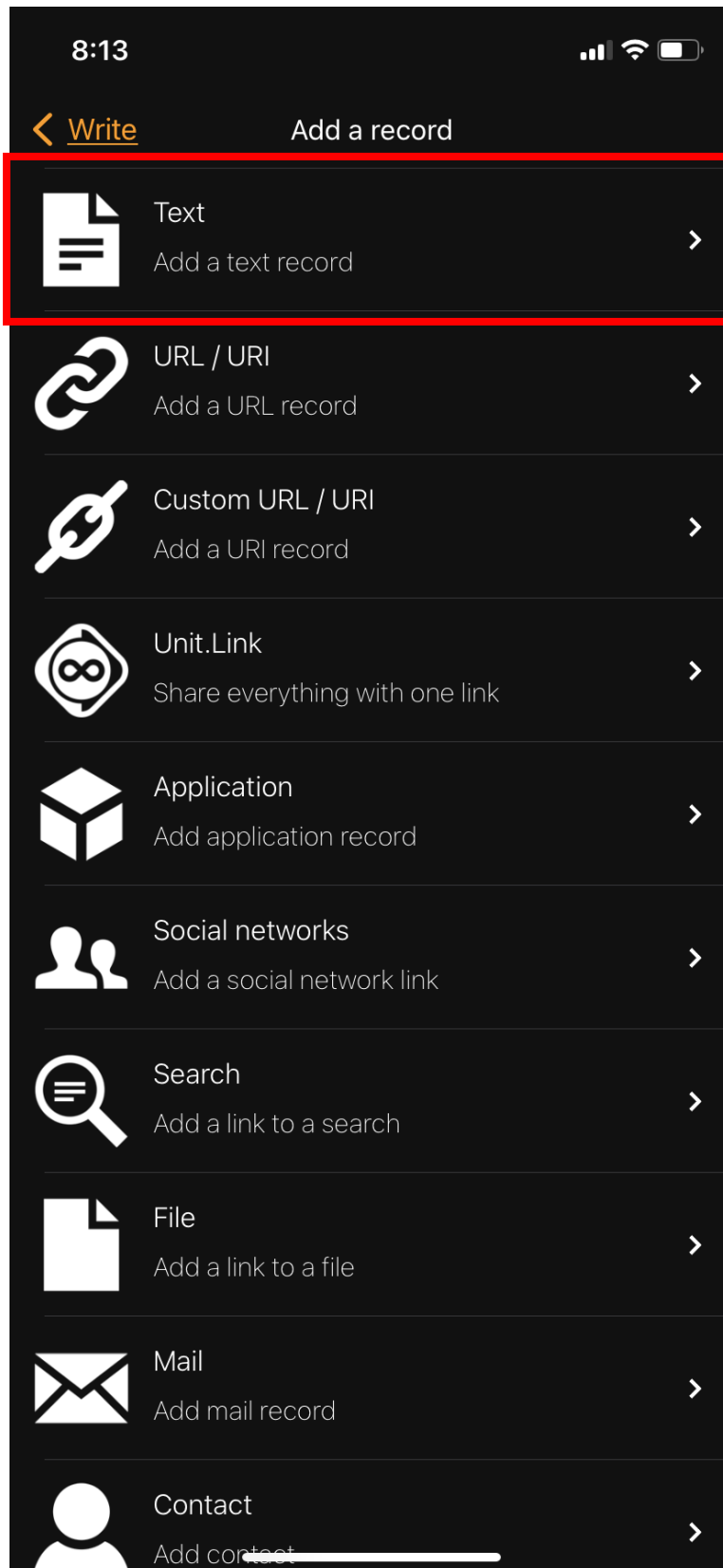
2. Click the “Write” button.



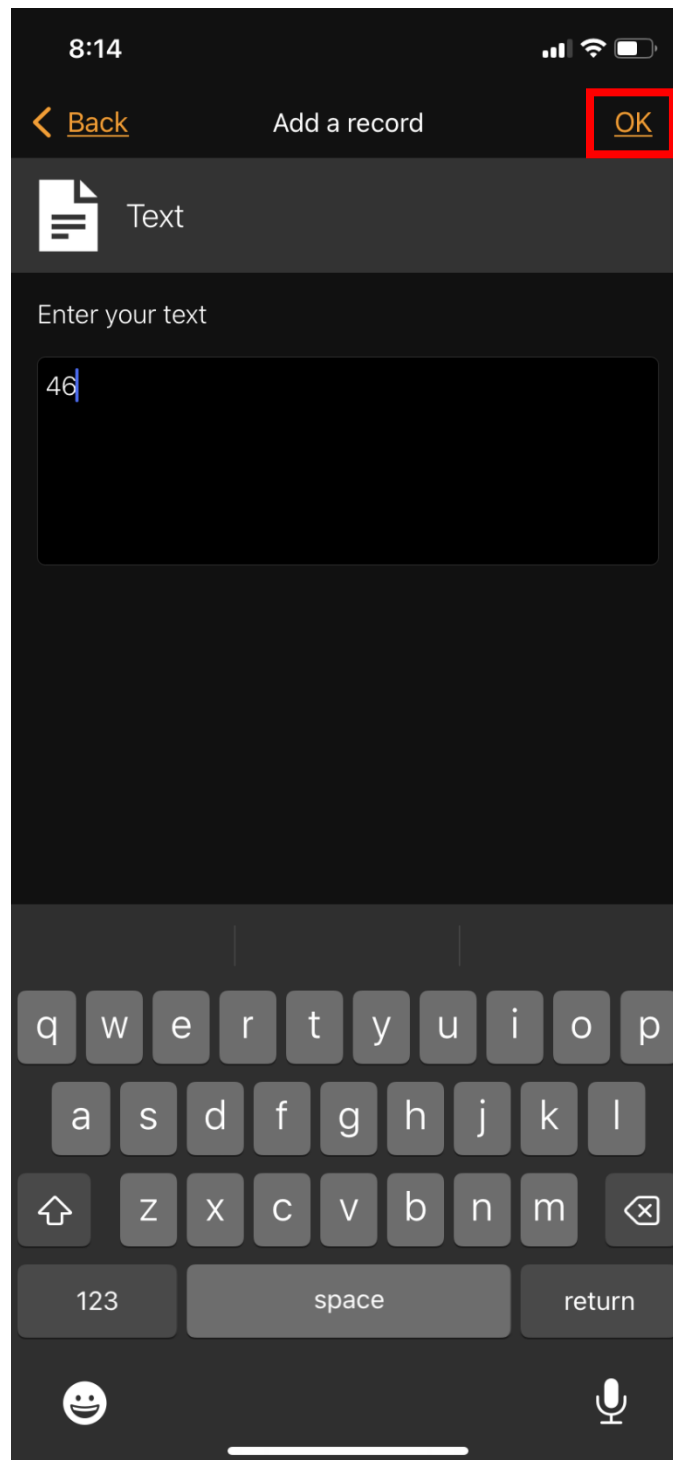
3. Click “Add a record” button.



4. Click the first option “Text.”

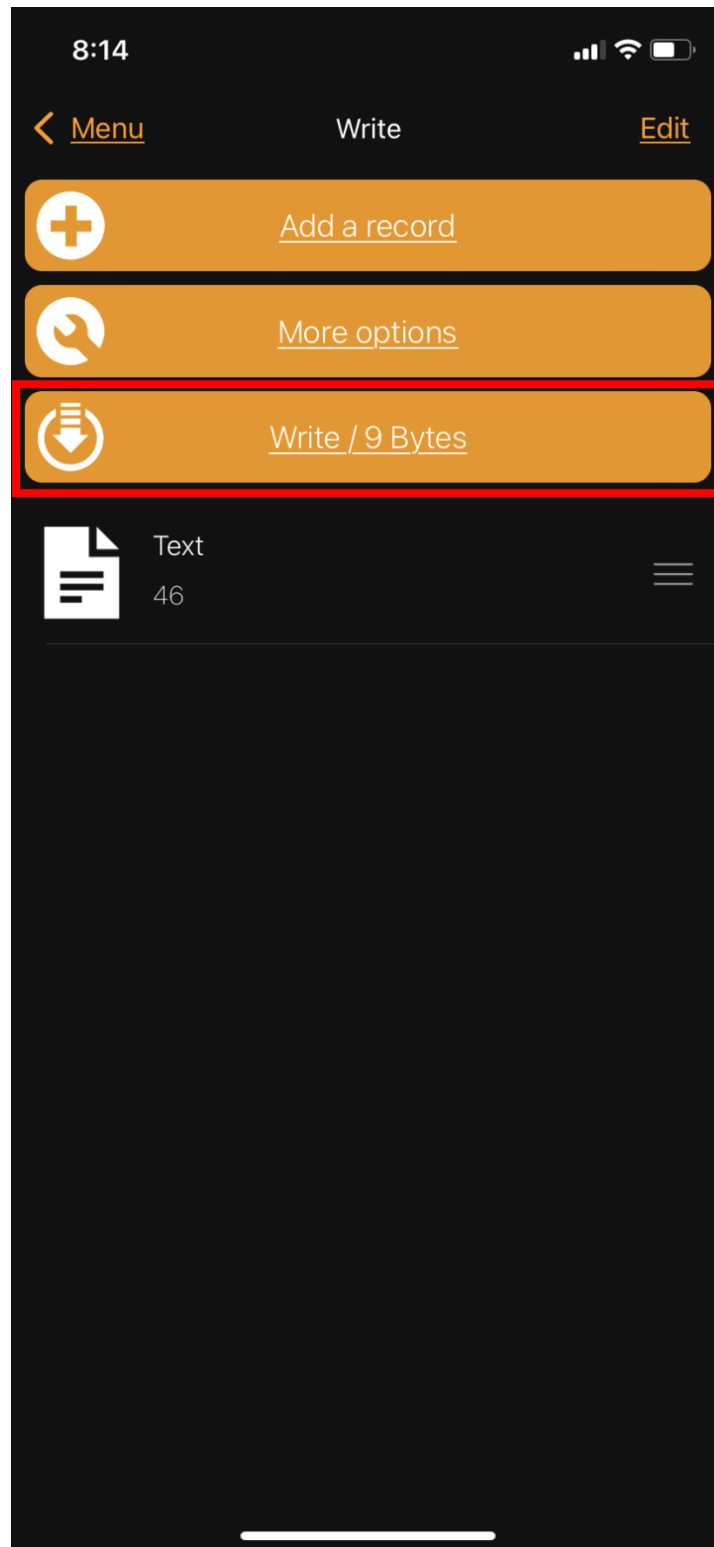


5. In the “Enter your text” box, type in the same number of the sound recording on the microSD card. NOTE: Do not put any zeros before the number. See example below.



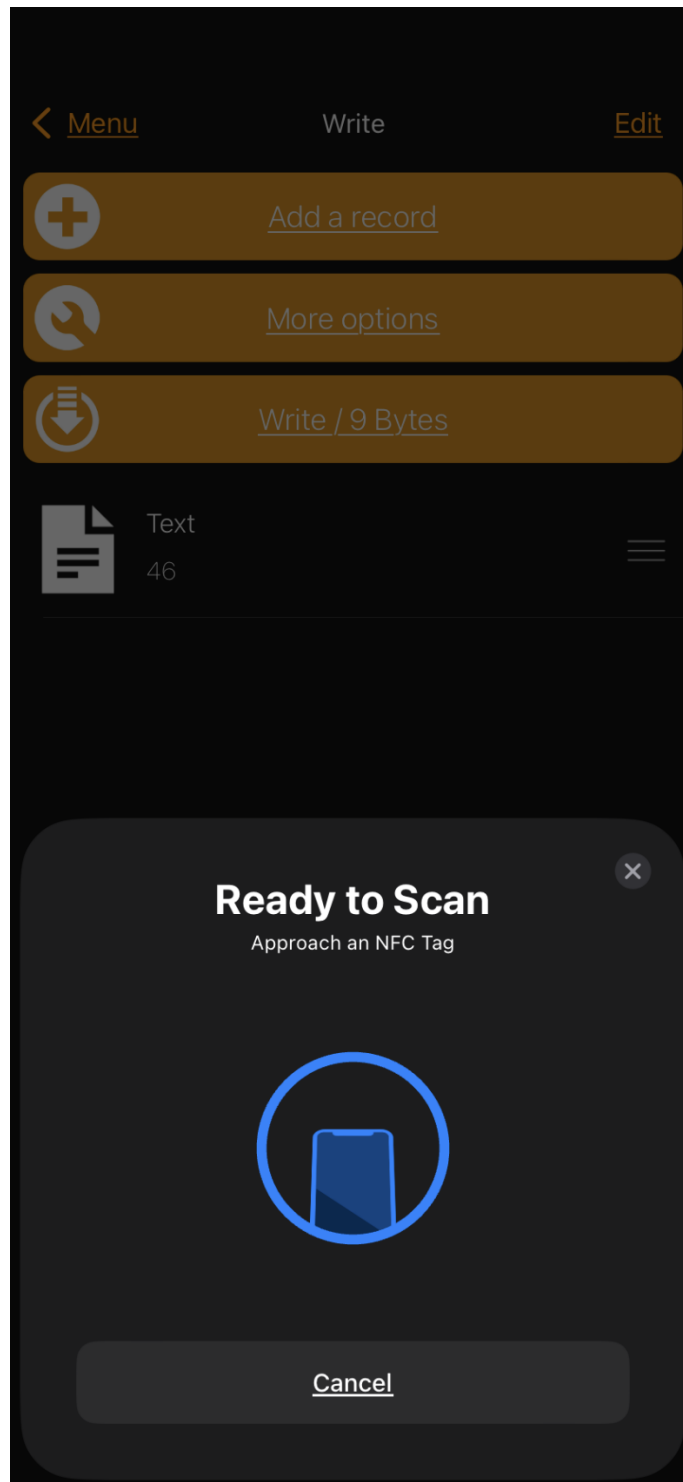
6. After typing the number hit “OK.”

7. Now press the button “Write / XX bytes.”

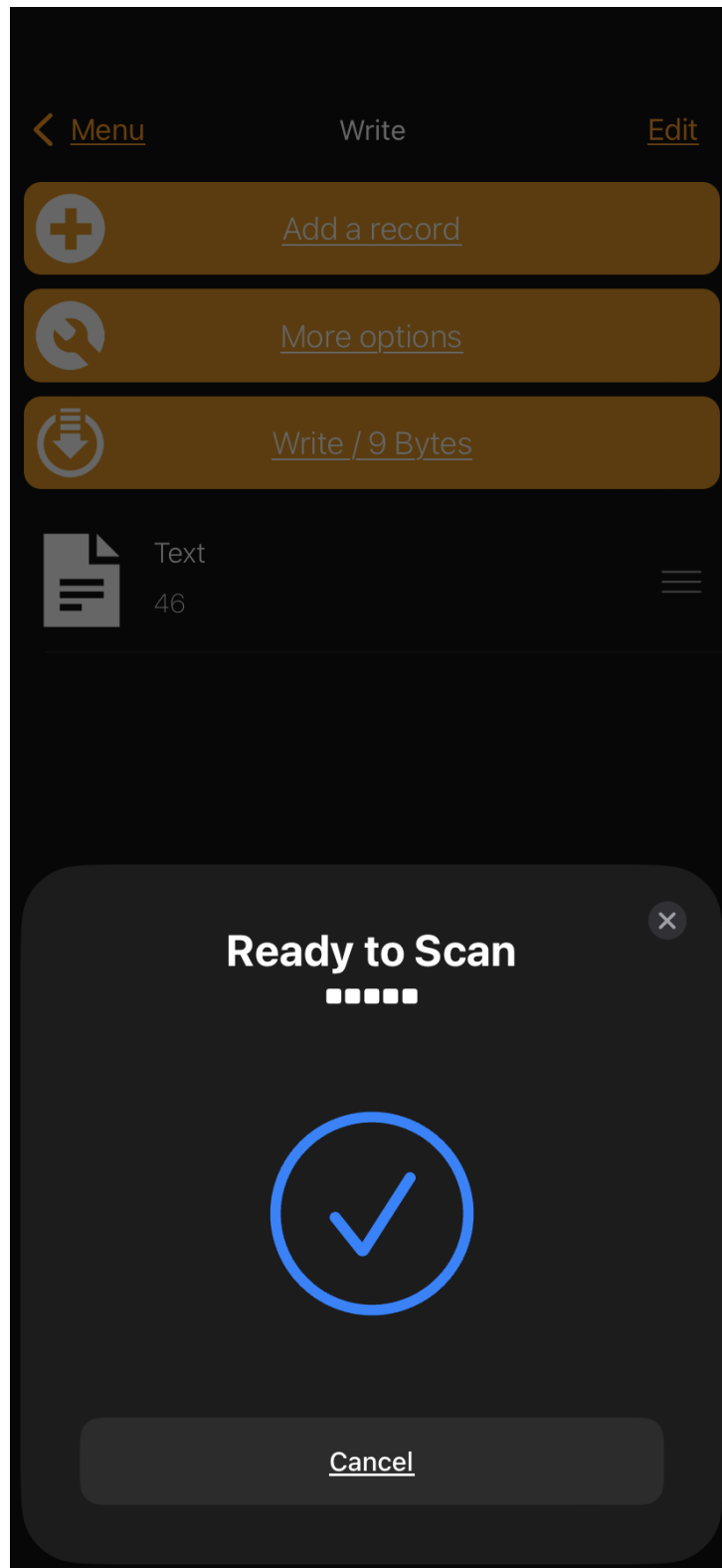


8. Hold the NFC card in front of the phone and wait for the phone to successfully write to the card.

Waiting for card:



Card successfully recorded:



Other Notes for General Use:

- After turning the box on, please wait to hear a small “pop” sound from the speakers before pressing any buttons. This allows the speakers and mp3 player to initialize before use.
- If a button is pressed and there is no response, turn the box off for a few seconds, and then turn it back on. This will reset the Arduino and should hopefully lead to the buttons working again.
- If the microSD card is lost, you can replace this card with another microSD card if it is 32GB or less and is formatted as FAT32.