Using the Recording Booth
UW Phonetics Lab

Nicole Chartier

1   Overview

This guide will walk you through using the sound booth to make a recording. It is divided into different sections based on the order in which you would set up, record, and retrieve your recording. Please take note of the default set up of the booth and desk/computer before recording, and make sure that you return the booth and the desk/computer back to the default setup before leaving the phonetics laboratory. If you have any questions or concerns, please contact the lab director or the current lab SA.

2 Checking Equipment

It is prudent and highly recommended to check the recording equipment station before you begin recording. Even though the equipment *should* be correctly set up, there is no guarantee that it will be. This step takes very little time to complete, but can help you to avoid a great deal of frustration. The following images show how the equipment *should* look.

Figure 1: Setup of Desk

Figure 2: M-Audio Fast Track

The picture above depicts how the M-Audio Fast Track should look when you use the recording booth. Please note that both the main power and the phantom power are turned on before you begin. These should always be left on–do not turn them off when you have finished.

The circled knobs on the M-Audio Fast Track will be used to adjust the volume of the recording, which is covered in a later section. Right now, it is important to check that the main power is turned on (blue light) and the phantom power is turned on (red light). These should always be on.

DO NOT TURN OFF THE MAIN POWER OR PHANTOM POWER WHEN FINISHED.

The default for the Shure Amplifier is off. If you are using the stand mic, however, you need to flip the switch on the upper right corner to 'on'. (See image below.) When turned on, the light next to the switch will flash green.

Figure 3: Shure Amplifier

3 Setting up

The setup for a recording is divided into four parts. The first two parts focus on setting up the computer and preparing Ardour for your recording. The third section discusses setting up the booth. These three sections can be prepared before your speaker arrives so that they do not have to wait for you to do these initial steps. The final section focuses on mic setup. Follow the appropriate instructions based on the type of microphone(s) you intend to use.

3.1 Computer Setup

After you have ensured that the equipment is set up properly, turn on the computer, make sure mirroring is turned on, and open Ardour. If the computer is not turned on, the power button is located on the Mac Pro here:

Figure 4: Mac Pro

To turn on mirroring, click on 'System Preferences' in the dock and go to 'Displays'. The dock is located at the bottom of the screen, and the 'System Preferences' application is circled in the image below:

Figure 5: Setting up mirroring
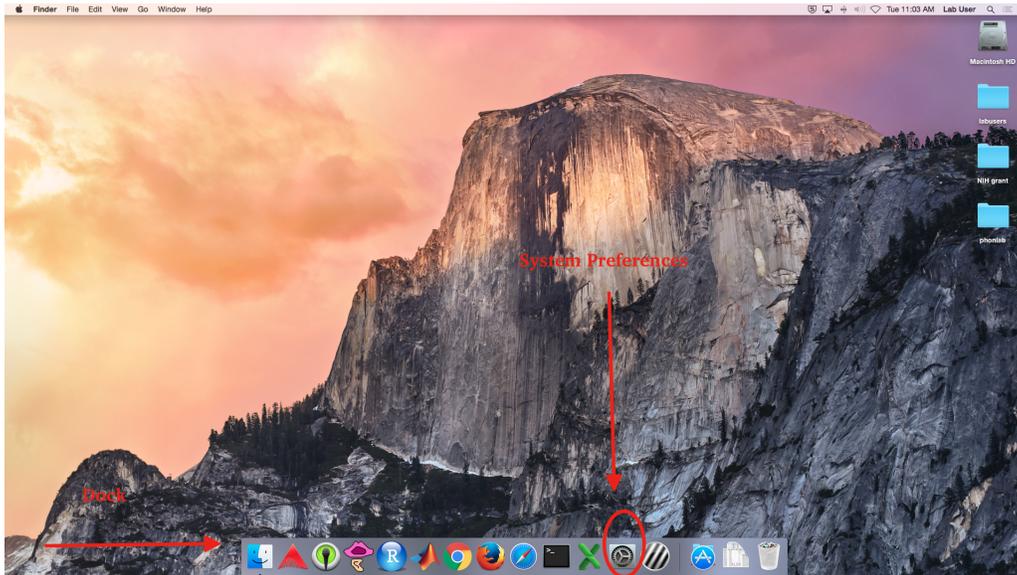
If the monitor in the booth is turned on, you should see three tabs, 'Display,' 'Arrangement,' and 'Color.' If the monitor in the booth is not turned on, you will not see the 'Arrangement' tab. Go turn on the monitor in the booth. Make sure under the 'Arrangement' tab, 'Mirror Displays' is checked. You can confirm this by going into the booth and making sure that the display is mirrored.

If mirroring is turned on, you can do the following step using either monitor.

3.2 Ardour Setup

Ardour can be found on the dock, as shown below:

Opening Ardour brings you to the following dialog box:
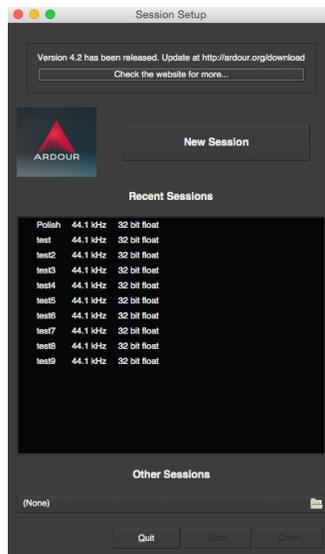
Unless you are resuming a previous session, select 'New Session' at the top of the dialog box to the right of the Ardour logo. When you begin a new session, the following window will appear:
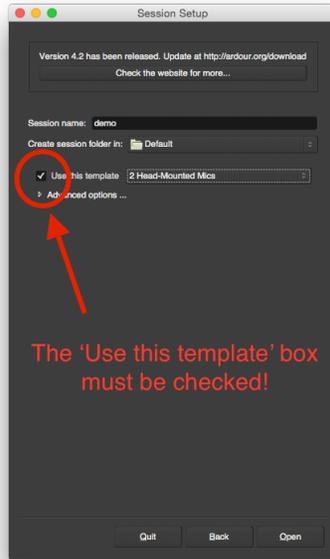
First, name the session in the 'Session name' box. In this example, the session name is 'demo.' Note that the session will be saved to the 'Default' folder. This is located in the 'labusers' folder. Navigating to this location will be explained later. Next, you need to select the type of session that you would like to set up. These are located in the drop-down menu box. There are three default setups to choose from:

A. 1 head-mounted mic

B. 2 head-mounted mics

C. stand mic

Choose the set up that you plan to use and **_make sure that the 'Use this template' box is checked._**

After you have selected the appropriate template, click 'open.' The following dialog box will appear:
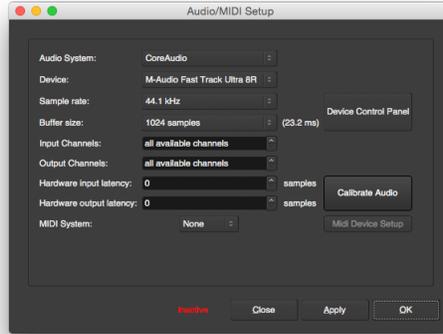
Do not adjust any of the settings in this window! Click 'OK' to be brought to the main screen, which should look similar to the one below:
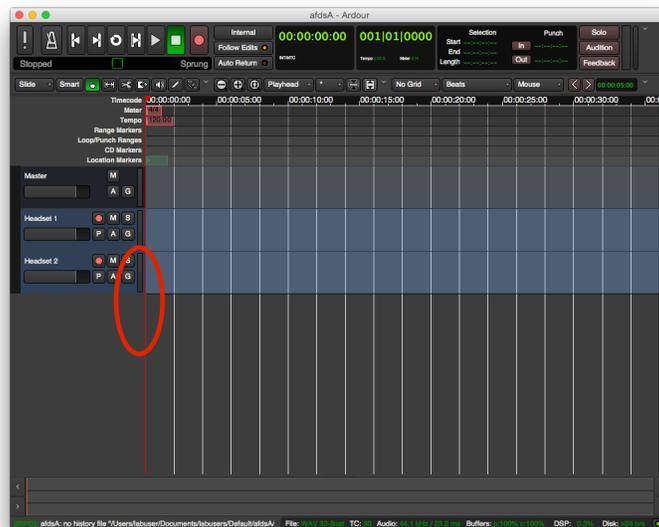
What appears on the left side of the window will depend on which microphone setup you chose. In the example above, '2 Head-Mounted Mics' was chosen. What you should see is a box for each microphone and a box that says 'Master'. There are many controls in this window, but for a basic recording, we can ignore most of them. You need to be aware of the following controls, circled in the image below:
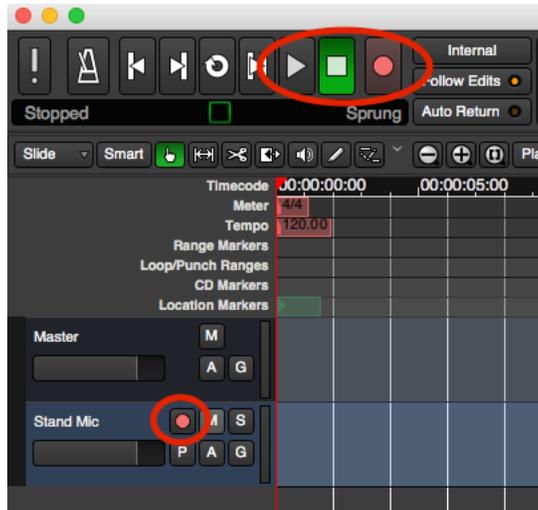
The top three controls circled in the image are, from left to right, 'play' 'stop' and 'set record'. The 'play' button will be used to start the recording after you have activated the recording. The 'stop' button stops the recording. The 'set record' button will be used to activate the recording. Please note that clicking this button **does not** begin recording. It activates the recording, but you must click 'play' to begin the recording process. When recording mode is activated, the button will blink.

On the left side, the 'record set' must also be activated for each mic you are using. Before you begin recording, the 'record set' buttons must be selected (there is a red outline around these buttons when they are activated). You can select these now to set up for recording.
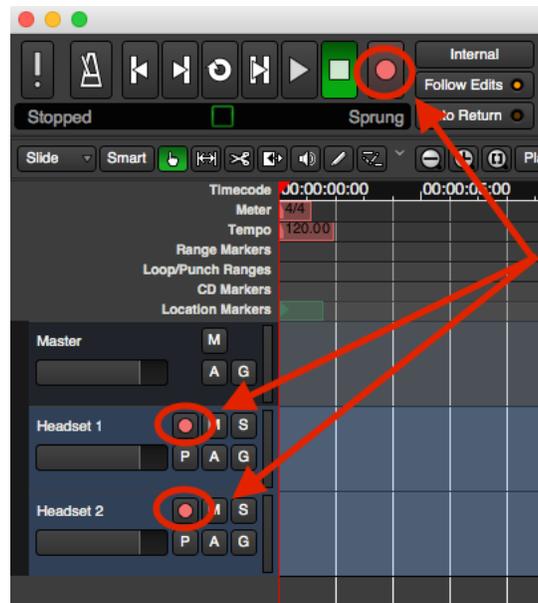
3.3   Booth Setup

The following booth setup steps can be done before your speaker(s) arrives. However, turning off the ventilation fan too soon will make the booth hot and stuffy, so it is not advisable to do this step too long before your speaker(s) arrives. The switch for the fan is located on the wall inside the booth, labelled 'fan.' After you have turned off the fan, take the four rectangular magnets from the wall and palce them over the vents. After you have placed the magnets over the vents, cover them with the extra felt and velcro the felt in place.

3.4   Mic Setup

This section contains two different setups: one for the head-mounted mics and one for the stand mic. For either mic setup, you will want to focus your attention on the M-Audio Fast Track (see Figure 2)and the volume meter in Ardour to adjust the volume settings for your recording.

3.4.1   Head-mounted Mic Setup

The head-mounted mics connect to channels 1 and 2 in the M-Audio Fast Track (see Figure 2). You will find the head-mounted mics located in hooks on the wall inside the booth.

Once the subject has put on the headset, route the cable down their back to avoid noise from the movement of the cord. You will want to avoid putting the microphone directly in front of the mouth. One way to achieve this is to adjust the microphone near the corner of the mouth, about an inch away from touching the person's face. You may need to adjust the microphone closer or farther away, depending on how loud your subject speaks. Try holding your hand over the microphone while they are speaking to see if you can feel strong puffs of air hitting the microphone. If you can, the microphone is too close. If you are recording multiple people, try to orient the microphones so that they are not pointing towards another speaker.

Test out the volume before you begin recording by having the subject speak or read material. While they are doing this, check the volume meter in Ardour and use the knob to the corresponding channel on the M-Audio Fast track. For head-mounted mic 1, the correponding channel is 1, and for head-mounted mic 2, the corresponding channel is 2.

Figure 6: Volume Meter in Ardour
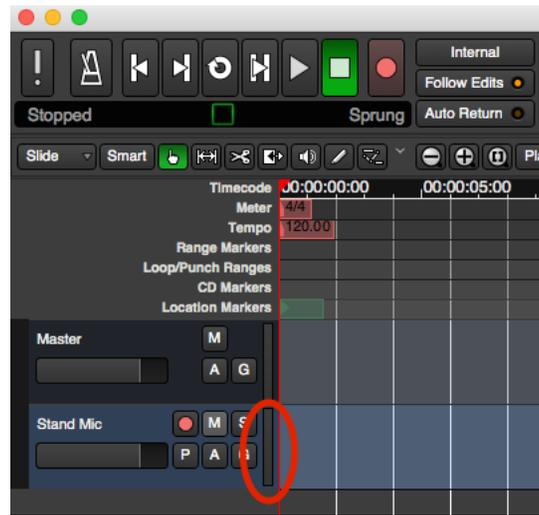
3.4.2 Stand Mic Setup

If using the stand mic, you will first need to turn on the Shure amplifier before proceeding. To turn on the Shure amplifier, see Figure 3.

The microphone should be placed directly in front of the subject, about six inches away from their mouth. You may need to move the microphone closer or further away, depending on the loudness of your subject. Try holding your hand over the microphone while they are speaking to see if you can feel strong puffs of air hitting the microphone. If you can, the microphone is too close.

Test out the volume before you begin recording by having the subject speak or read material. While subjects are speaking, adjust the settings on the Shure Amplifier. If you see that the needle on the VU meter on the amplifier is barely reaching the red-zone (0dB) and only very briefly, the settings are fine. If they are too low, try adjusting the levels up a bit. To adjust the volume, you will use the 'master' knob, which is the blue knob on the left (see figure 3). The left-most black knob can be used for fine-tuned adjustments, but this knob needs to stay between 3 and 7 (mid-range). When you are adjusting the volume on the Shure amplifier, *first* adjust using the master knob (blue). If more fine-tuned adjustments are needed, then use the input knob 1 (black).

4   Recording Audio

After you have checked the volume of the microphone(s), navigate back to Ardour to begin recording.

4.1   Starting the recording

To listen while you are recording, put on the headphones that are located on the desk. The headphones should be plugged into the headphone 1 port on the M-Audio Fast Track.

To record audio, click the red record button at the top if you have not done so already. This will flash when recording mode is activated. Please note that the recording has not yet begun. When you are ready to begin recording, click the play button. This will start your recording.

4.2   Finishing the recording

When you have finished your recording, click the stop button. Clicking the stop button *should* also deactivate the record set button on the top control bar, but it *shouldn't* deactivate the record set button for the microphone. To deactivate the record set button for the microphone, click it. Ensure that both record set microphones are deactivated (no longer blinking) *before* you export the audio. If the record buttons are blinking, select them to deactivate recording mode; if the record buttons are not blinking, do not select them. If you do not deactivate the recording, Ardour will export silence instead of your audio. You will know that the recording mode is deactivated because the record buttons will no longer be blinking.

5   Exporting Audio

After you have finished recording, you will need to export the audio file.

First ensure that both the record buttons are turned off. Not doing so will result in Ardour exporting silence.

To export your track, click 'Session' in the menu bar, then 'Export' and 'Export to audio file(s)...'. This will open the export window and allow you to choose a filename, filetype (WAV by default) and location to export to. By default, the exported file will be stereo. To convert to mono, expand the 'time span and channel options' and change 'channels' to 1. Click 'Export'.

You may also want to save your session, which will preserve tracks and metadata in case you need to do any editing later. Saving the session is recommended.

After you have completed and exported your recording, you can find it in the 'Default' folder. To get to this folder from Finder, go to 'Labusers' > 'Default'. From the Desktop, open the 'labusers' folder. Then open the 'Default' folder. If you saved the session, you will find a folder with your session name. Click on the folder, and you will see a subfolder named 'Exports'. In this folder, you will find the audio file that you exported.

There are two available USB ports to save your files on the left side of the monitor. You can also upload the file to a file-sharing site or email it to yourself.

6   Cleaning up

After you have finished your recording, please clean up the booth, desk, and computer. To clean up the booth, please remove the magnetic panels from the booth vents, and place them back on the wall. Turn the booth fan back on, and turn the booth lights off. If you used the stand mic, turn the Shure amplifier off. After you have extracted your file(s) from the Default folder, remove it from the computer. You can remove it from the computer by moving the file(s) to the trash. Do not expect your data to remain on this computer indefinitely. Make sure you have quit Ardour. You can quit by two methods: On the menu bar, click Ardour > Quit; or right-click the Ardour icon in the dock and select 'Quit'. You can leave the computer on when you have finished.