Praat handout #5	Recording a sound file in Praat

For some phonetics work, you will need to record your own sound files using Praat. This handout gives a basic overview of how to do this, and what settings to use.

> The Praat software is frequently updated by its authors. The changes are usually small, but if you are using this handout with a different version of Praat from the one listed below, you may find that some of the functions and features look or act slightly differently from the way they are described here.
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> *These instructions were updated for Praat version 6.2.16 on October 31, 2022.*

5.1   Recording a sound file with the Praat "SoundRecorder"

(1)   In the top menu bar of the Objects window, choose `New > Record` **`mono`** `Sound`.

> Be careful here: Use mono. Do not use stereo. We have no need for stereo recordings, and they take up twice as much memory because there are two tracks.

This will open up a window called "SoundRecorder".

- Notice the settings for **sampling rate** ("sampling frequency"—why is this a synonym?) shown at the right. Use the default setting of **44,100 Hz**.

- The SoundRecorder doesn't usually allow you to choose settings for **quantization** (this may depend on your operating system/sound card). We want at least **16-bit quantization**. If you are not given a choice, the program is always using at least 16-bit quantization, so you should be fine.

(2)   The white rectangle in the center of the SoundRecorder labeled "Meter" shows the **input level**—the amplitude of the sound being recorded. Remember to *stay out of the red zone* when you make your actual sound files. But, for a low signal-to-noise ratio, try to get the amplitude as *high* as possible without going into the red zone. (This means the amplitude of your speech data will be as high as possible compared to the amplitude of any background noise.)

Some tips for clean recordings with a good signal-to-noise ratio:

- You are likely to get better quality by using an **external microphone**, not your laptop's built-in microphone.
- Adjust the recording level by changing **how close** the microphone is to the talker's mouth.
- Place the microphone **slightly to one side**, rather than directly in front of the talker's mouth, so that high-amplitude events like stop bursts don't send the input level into the red zone.
- If possible, use your laptop on **battery power** while you record. A/C power adapters often add a low-frequency hum to the signal. Similarly, it can help to place the microphone (and the talker) as **far from the laptop** as possible.

(3)   Sound recording **buffer size**: By default, Praat allows 60 Mb of recording before the recorder shuts off. If you are recording in mono (not stereo!) at the default sampling rate of 44100 Hz, this gives you 660 seconds, or 11 minutes, of recording time per sound file.

This is probably enough for most projects, but if you are recording a long text or interview, you may need to make the buffer larger (or else record at 22050 Hz, which will double the recording time for the same buffer size). To change the sound recording buffer size, in the Objects window, click on `Praat > Preferences > Sound recording preferences` and change `Buffer size`.

(4)   It is a good idea to **practice** a little before making the recordings you plan to keep. Click on the `Record` button and have your speaker start talking. Watch the input level and adjust your microphone until you get an input level that you like. Every time you click `Stop` and then click `Record` again, the previously recorded sound is erased, so you can practice repeatedly until things are working well. You can listen to what you have recorded by using the `Play` button.

5.2 Saving your recording as a sound file

(5)   When you make a recording that you want to keep, you need to **save** it as a sound file. There are two ways to do this.

(a)   *Put the sound file into the Objects window*
- At the bottom of the SoundRecorder window, there is a button labeled `Save to list`. Enter a name for your sound file in the small box (the default name is "untitled") and click on the button. Your sound file is now one of the Sound objects listed in the Objects window, so it is safe to make another recording in the Sound Recorder.
- However, **before you exit Praat, you must save your sound file from the list of objects to your computer or USB drive!** Do this by highlighting the sound object in the Objects window, clicking on `Save` in the top menu bar, and choosing one of the audio file types in the menu that appears (see (b) below or Praat handout #2 for more information about audio file types).

(b)   *Save directly to file*
- Click on `File` at the top of the SoundRecorder window. You will get a menu of options. Choose `Save as...` for whatever file format you like. If you are on a Windows system, you may want to use .WAV; if you are on a Macintosh, you may want to use .AIFC. But it doesn't really matter (just don't pick a format that shows a bit value of less than 16—remember quantization).
- Once you make a selection, you will get a dialogue box in which you can specify a file name (tip: use a name that will remind you what the sound file

is) and where to save the file.

- Your sound file is now saved, although it does not appear in the list of objects in the Objects window. See Praat handout #2 on how to read a saved file into the list of objects.