

# Adobe Audition 2021

## 4 – Recording

There are several reasons why you might want to record sound in Audition. One obvious reason is to record speaking using a microphone, such as if you are recording an interview or preparing a podcast.

Other times instead of a microphone you might have an external device connected to your computer (connected to your computer's line input connection). For example you might want to transfer an existing recording on to your computer. Such as if you want to copy an old vinyl record or tape to your computer so you can save a digital copy. Or perhaps you're at a live music event and want to record from the sound system into a computer.

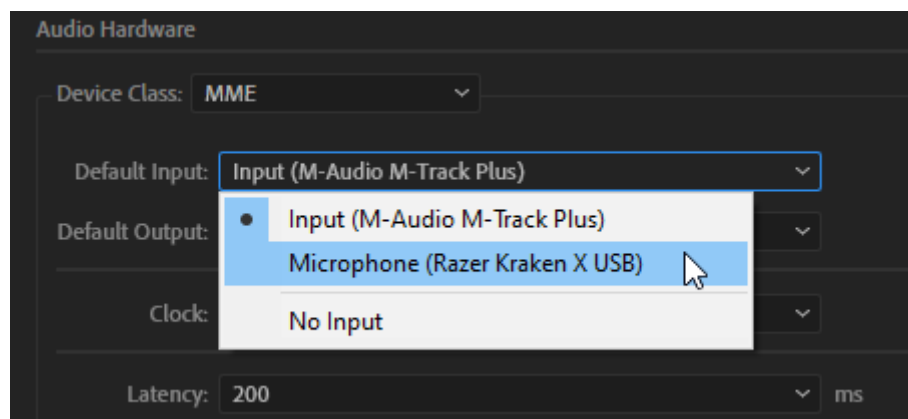
This section will focus on recording with a microphone while a later section will look at recording from other sound sources.

### Setting up your Input

Before you can record sound into Audition, you need to make sure Audition knows where the sound will be coming from. Your computer might have onboard sound with your motherboard, a dedicated sound card and a USB headset plugged in. Any one of them could be used as a recording source so you need to tell Audition which one to use.

## Exercise 1. Setting your Input Source

1. With Audition open go to the **Edit** menu, select **Preferences** and then select **Audio Hardware**.



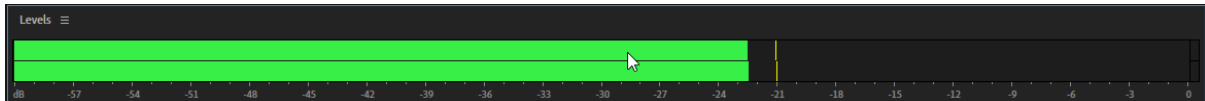
2. Choose the device you will be using for recording and then click **OK**.

**Note** If you don't have a suitable recording device such as a headset or microphone then read through the next sections anyway so you can be prepared for when you do have one. When you get to **Exercise 5**, you will be able to work with sample files that have already been recorded.

## Exercise 2. Testing your input

As we saw earlier, when sound is playing in Audition, a Levels meter at the bottom of the screen will show the volume level of what is playing. You can use that to check the volume levels before recording.

1. Double-click the Levels meter at the bottom of the screen to activate it. Firstly this will ensure that your input device is actually working. Secondly it will let you see the levels of the sound coming into your computer.



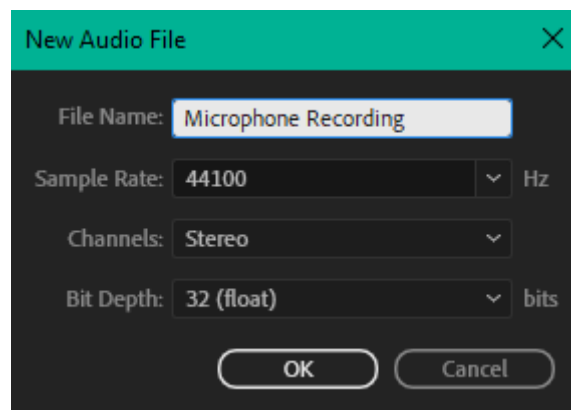
If you are able to adjust the recording level of your microphone or input device you can do it now to make sure your volume is not too loud or too quiet. You can also practice speaking without recording to get the volume right. You don't need to have any sound files open to do this.

2. Once you're satisfied with the sound levels, double-click the levels meter again to turn it off. It will activate again when you begin recording.

## Exercise 3. Making a Voice Recording

Time to create a new blank sound file to record in to.

3. From the **File** menu select **New** and **Audio File** or press **Ctrl Shift N**.
4. Fill in the **New Audio File** settings as shown below and click **OK**.



Remember that the **Sample Rate** refers to the number of times per second that the computer will sample the recording. 44100 Hz is equivalent to CD quality audio.

The **Bit Depth** refers to the range of possible sound values that can be recorded for each sample. 16 bits (65,536 values) per sample is equivalent to CD quality but having a higher setting while recording doesn't hurt.

While recording, read the following sentence. Perhaps have a couple of practice tries before you start recording.

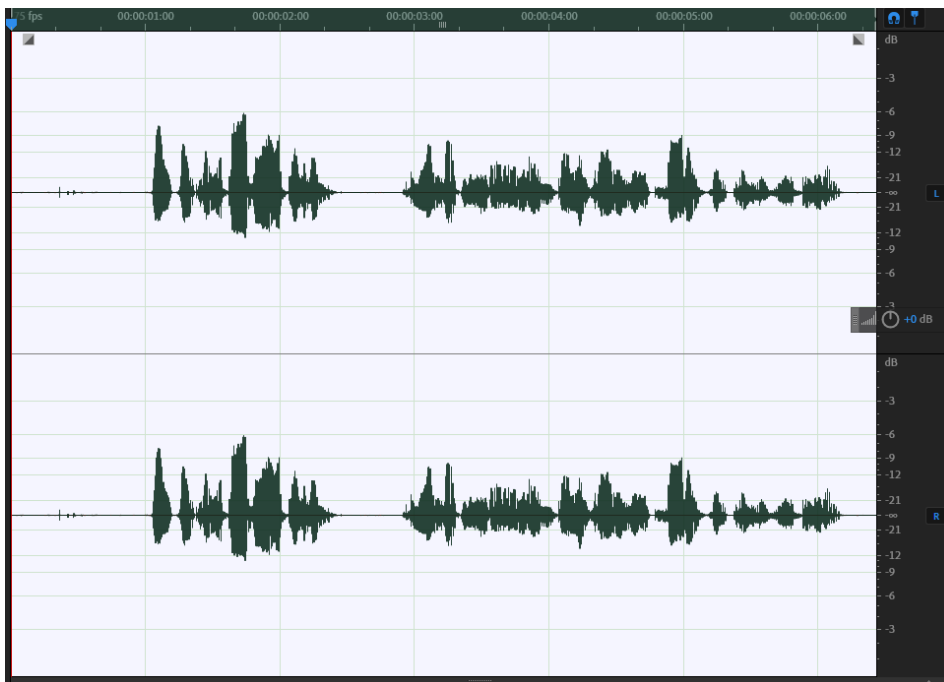
## Welcome to Adobe Audition.

### In this exercise I am demonstrating the recording features of Audition.

5. When you are ready, click the **Record** button in the Transport bar.
6. Press the **Stop** button (or press the Spacebar) when you want to finish recording.



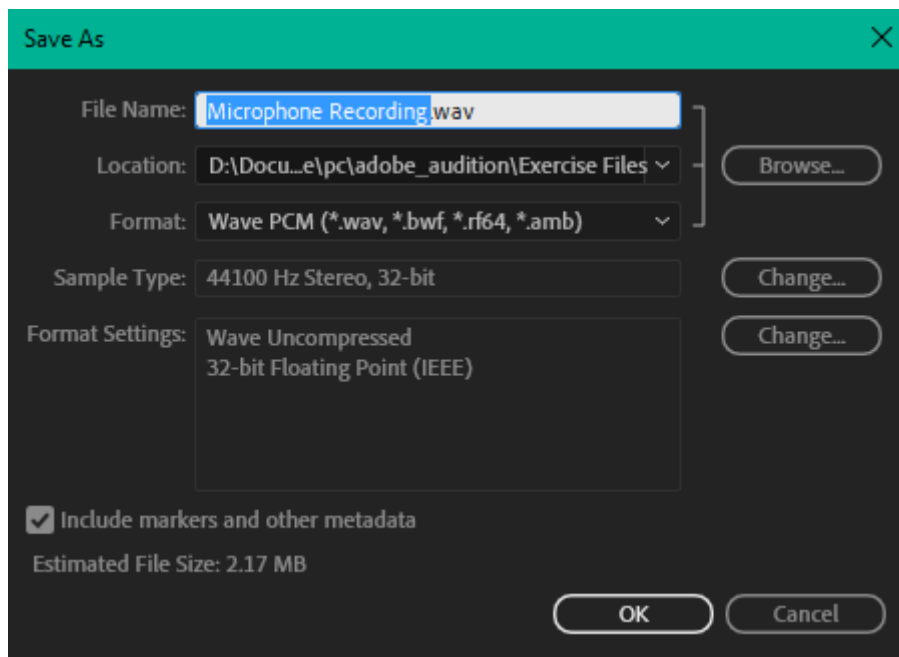
When it has finished recording, your new recording will be shown as a waveform. The whole waveform will be selected when the recording is finished.



It might take a couple of tries before you're happy with the recording. If you're not satisfied with your recording then simply press **Del** on your keyboard while it is selected to delete the recorded audio (if it's not still selected press **Ctrl A** to select all of the recording). Once the recording has been cleared, you are ready to try again.

7. Once you are satisfied with the results, press **Ctrl S** to save your recording.

The save options allow you to specify the filename, the save location, file format and quality settings. The file name is already filled in based on the title you put in the new file settings, but you can change the filename if you prefer something else.



For now we'll stick with the default WAV format to save it in since it's a format that saves with no loss in quality. There might be occasions where you need to save in a different format and we'll look at some of them later on.

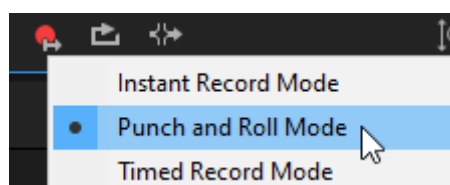
8. Make sure the **Location** is set to a suitable place to save your file and click **OK** to save the recording.

## Exercise 4. Using Punch and Roll

If you are recording a longer segment and make a mistake, you probably don't want to start the whole recording over again. You also might find it hard to start right on the spot where you made the mistake since you'd want to match your tone of voice and speaking pace to what you had been saying earlier.

Punch and Roll helps you to re-record part of your recording when you need to and then continue on with your recording.

1. Make sure your previous recording is still open. We're going to re-record the second line while leaving the first line as it is.
2. Locate the part of your recording just before the words ***In this exercise*** and click on that spot to place your **play head** there.
3. **Right-click** on the **Record** button and select **Punch and Roll Mode** to turn on this mode of recording.



**Tip** You can also press **Alt Shift Spacebar** to immediately begin recording with Punch and Roll Mode activated.

When Punch and Roll mode is activated 2 things will happen when you record. Audition will play a bit of your audio before the spot you have selected. This is referred to as **Pre-Roll**. With default settings this will be 5 seconds though this amount can be changed in Audition's settings. This allows you to listen to the recording as you prepare to record again. This can help you to match your tone and cadence. As soon as it reaches the designated spot, Audition will begin recording, over-writing what was already recorded.

This time when we record we are changing a couple of words. Take a look at the text below so you know what will need to be recorded.

## Welcome to Adobe Audition.

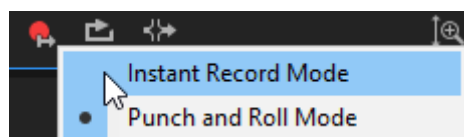
### In this exercise I am demonstrating the Punch and Roll recording features of Audition.

The first line won't change and Audition will play that as it was already recorded. While that part is playing, it might be useful for you to speak over the top of it to help match what was already recorded. As soon as it reaches the second line, continue reading as it records.

4. Click the **Record** button (or press **Alt Shift Spacebar**) to begin recording in Punch and Roll mode.
5. Stop recording using the **Stop** button ■ or the **Spacebar** as you get to the end of the sentence to record.

If you're not happy with the recording you can simply try it again as Punch and Roll will still record from the same spot.

6. When you no longer need Punch and Roll, you can **right-click** the **Record** button again to turn it off.



7. Press **Ctrl S** to save the changes to your recording.

## Exercise 5. Using the Healing Brush

When you are recording audio, it's always a good idea to minimise background noises as much as possible. Close doors and windows, turn off nearby fans or other electronic devices. Unless you're using a professional recording studio though, there will probably be some background noises in your recording that you would rather not have.

Sometimes that additional noise is difficult to avoid. For example if you film an interview outside, edit the video in **Adobe Premier** and then edit the audio from that video clip in Audition, you might have sound from wind on the microphone and other outdoors sounds.

In this exercise we will look at a couple of ways to reduce background noise from your recording.

1. Open the file called **Cleanup.wav**.

In the sample file there are a couple of things we might want to fix. Firstly, around the 8 second mark there is a noise from an object on a desk falling over during the recording. Secondly, there is some constant background noise largely caused by things like a nearby fan and open window. Since the recording was made on a laptop computer, the computer's fan also added some extra noise.

First, we'll look at removing the unwanted sound from the middle.

2. Zoom in on the sound at approximately 8 seconds.
3. Click a little bit before that point and play so that you can hear the sound of the object falling over.

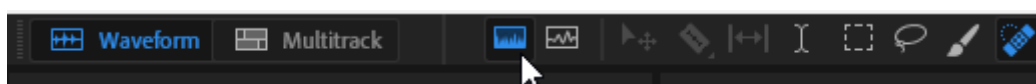


While we are in Waveform Editor view, we can see the amplitude (volume) of different parts of the sound represented as the green peaks. Sometimes that isn't enough visual information.

4. From the **View** menu select **Show Spectral Frequency Display**. This will add a spectral view below your Waveform view.

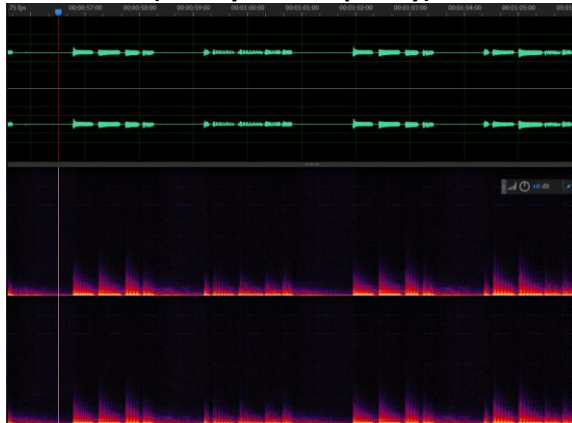
Spectral Frequency View represents your sound as colours. The bottom part of the view shows the lower frequencies (deeper sounds) while the upper part shows higher frequencies (higher pitched sounds). The colours show how strong the sound is in that area. So, if the colours are brighter toward the bottom in a certain part of your file, it shows that there is a lot of low frequency sound in those areas.

**Tip** You can also turn **Spectral Frequency Display** on and off by pressing the **F9** key or by clicking the icon on your toolbar.



Here are some examples showing how certain sounds might look in spectral view.

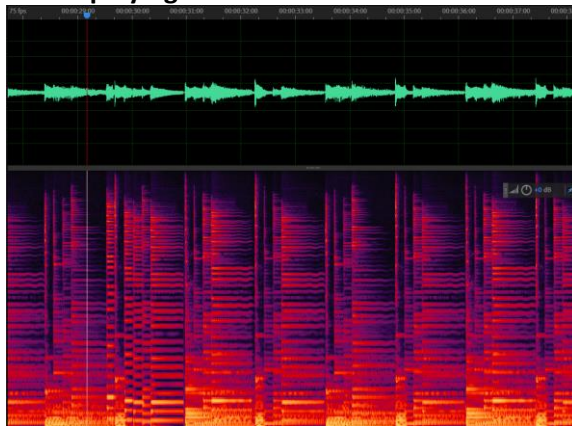
**Bass Guitar (mostly low frequency)**



**Hi-hat symbol (mostly high frequency)**



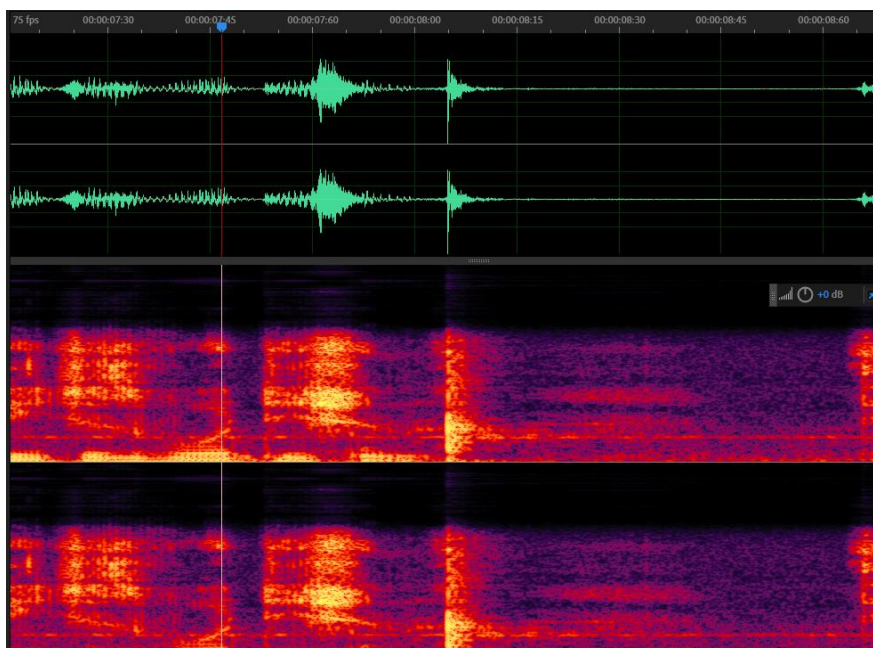
**Guitar playing**



**Woman Singing**

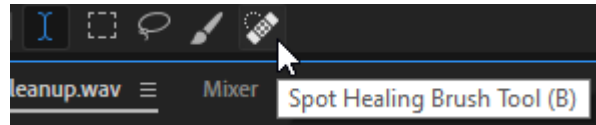


When you look at our sound in the Spectral Frequency Display you can see that the sound we want to remove looks a lot sharper and less natural than the sound from the speaking. In many cases in spectral view, it is far easier to see certain sounds than it is in waveform view. In fact, unwanted sounds will often stand out in spectral view even more than in this example.



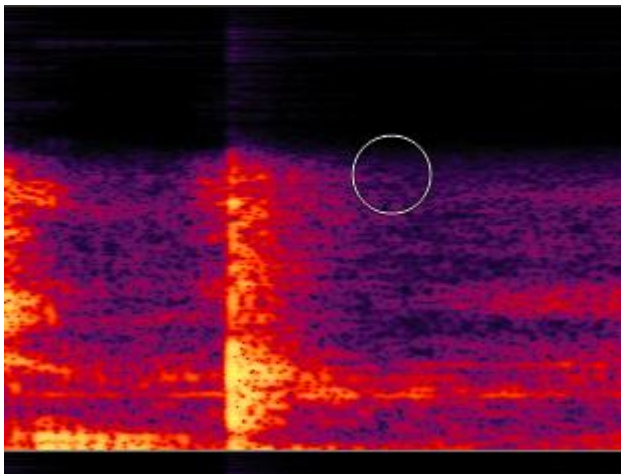
If you are a regular Adobe Photoshop user then you may already be familiar with the spot healing brush tool which lets you paint over parts of a photo that need blemishes quickly removed. Audition has a spot healing brush that works in the same way. While in spectral view, you can use the spot healing brush to paint over parts of the sound that you want to remove.

5. Click the **Spot Healing Brush** icon on the toolbar (or press **B** on your keyboard).

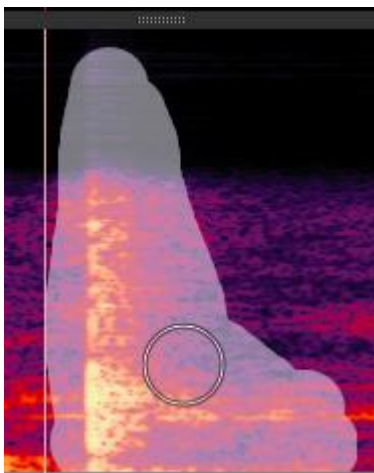


Your mouse pointer will now be a circle shape when you move your mouse over the spectral view. The circle indicates the size of the area you will paint over. Just like Photoshop, you can adjust the size of the brush circle by pressing the square bracket keys [ ] on your keyboard.

6. With your mouse over the spectral view, press the [ and ] keys on your keyboard to adjust the size of your brush until it is similar to the size shown below.



Paint over the brighter colours that represent the sound we need to remove.



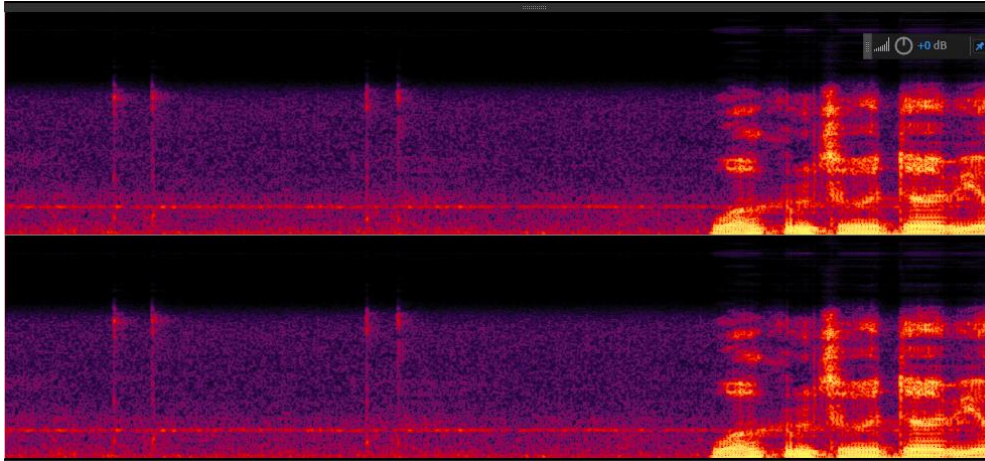
When you are finished painting, Audition will remove those frequencies and fill in the space as well as it can with the sound from around that area. In a stereo file, painting on one channel will also paint the same area on the other channel. If you only want to do one channel, remember you can click the buttons to the right to turn a channel on or off.

7. Click a little before the fixed area and play the sound to hear the result.



## Exercise 6. Using Noise Reduction

1. Press **Home** on your keyboard to move to the start of the file (or scroll to it using one of the other methods shown earlier).




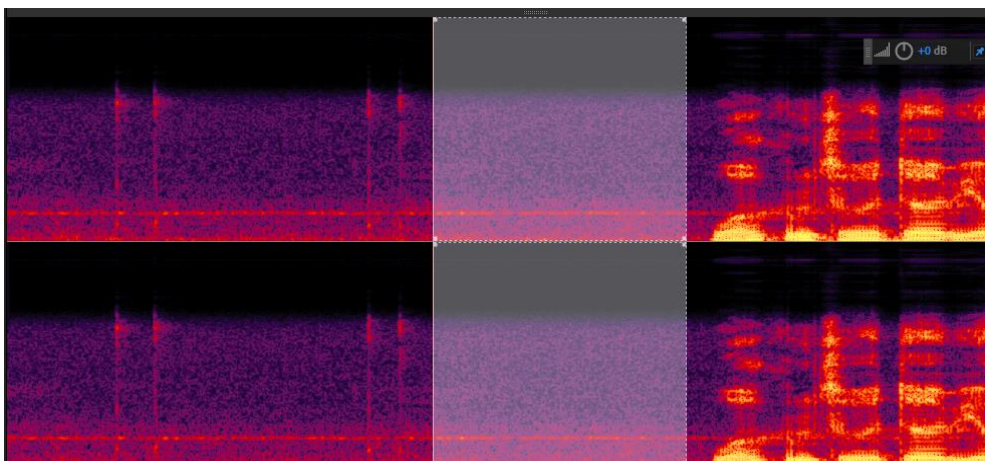
2. Play the first part of the sound to hear the noises before the talking begins.

You will hear some mouse clicks which can be clearly seen in the spectral view. Since they are before the talking, they are easily removed since we can delete that whole section. What is not so easily removed is that faint humming sound since that continues through the entire file, not just at the start. Removing background noises like that involves 2 key steps.

- a) Select a sample of the sound to be removed by creating a *Noise Print*.
- b) Use the *Noise Reduction* options to remove that sampled noise from your sound.

Creating a noise print is an important step since that tells Audition what kind of sound you want removed. It's a bit like telling the computer "hear what this sounds like – that's what we want to get rid of in the rest of the file". The best type of noise print is taken from a part of the file that only contains the sound you want to remove. This is why it can be a good idea to make sure there is a few seconds of silence before whatever you are recording. In the example we are using, there is a little over 2 seconds in the recording before the talking starts which gives plenty of room for a noise print.

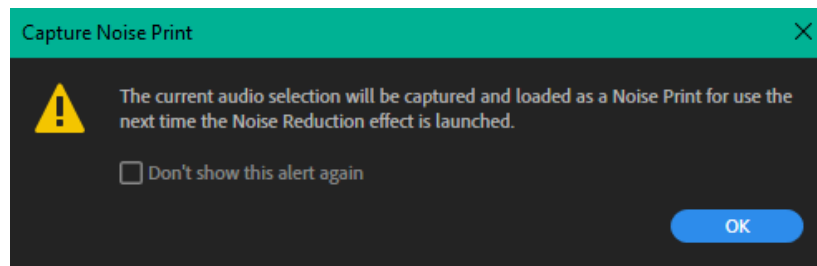
3. Activate the **Time Selection** tool by clicking the  icon on the toolbar or pressing the letter **T**.
4. Select a section of the file that doesn't contain any talking.



A section at the beginning of the file where there is only background noise would be a good choice. If we didn't have any blank space at the start or end of the recording you could use a slight pause during the speaking.

- From the **Effects** menu, select **Noise Reduction / Restoration** and then **Capture Noise Print** (Or press **Shift P**).

A message may appear letting you know the noise print has been captured. If you'd rather not see a message each time you capture a noise print, click the **Don't show this alert again** option.



Now that we've captured a noise print, we're ready for the noise reduction options.

- From the **Effects** menu, select **Noise Reduction / Restoration** and then **Noise Reduction (Process)** (Or press **Ctrl Shift P**).

If we hadn't already captured a noise print, we could do it here using the button near the top.

- Click **Select Entire File**. If we didn't already have anything selected, then applying the noise reduction options would apply to the whole file.
- Just as in earlier exercises, we can use the preview button in the bottom corner of the options to hear how our changes affect the sound. Try adjusting the Noise Reduction options to the right and left and preview to hear the difference at different amounts.
- Set the **Noise Reduction** to approximately **80-90%** and set the **Reduce by** setting to approximately **10 decibels**. Preview to hear the difference.



Often it takes a bit of trial and error to get the settings right. Not enough reduction and you still have a lot of the unwanted background noise. Too much noise reduction can leave your recording sounding un-natural. Too little noise reduction often sounds better than too much.

- Click on **Advanced** near the bottom to display some advanced options.
- The **Spectral Decay Rate** setting can help reduce the watery sound that sometimes results from noise reduction. Set it to approximately **10%**.
- Turn on the **Output Noise Only** option and preview the sound. While this option is ticked you will only hear the sound that is being removed. This is helpful to make sure you aren't removing too much of the important sounds. If you preview your sound while this option is selected, you should hear very little of the speaking.
- Turn the **Output Noise Only** option off and click **Apply** to make the changes.
- Now you can trim the silence from the beginning and end of your sound file and save the changes.