

3.3 – Removing Hiss, Hum and Noise

Ideally, everything will go as planned and you will have recorded perfect, crystal clear audio but unfortunately that may not always be the case. Environmental factors can cause some unwanted noise that can be unavoidable, but it is important that we distinguish what is considered to be hiss, hum and noise, and what is avoidable.

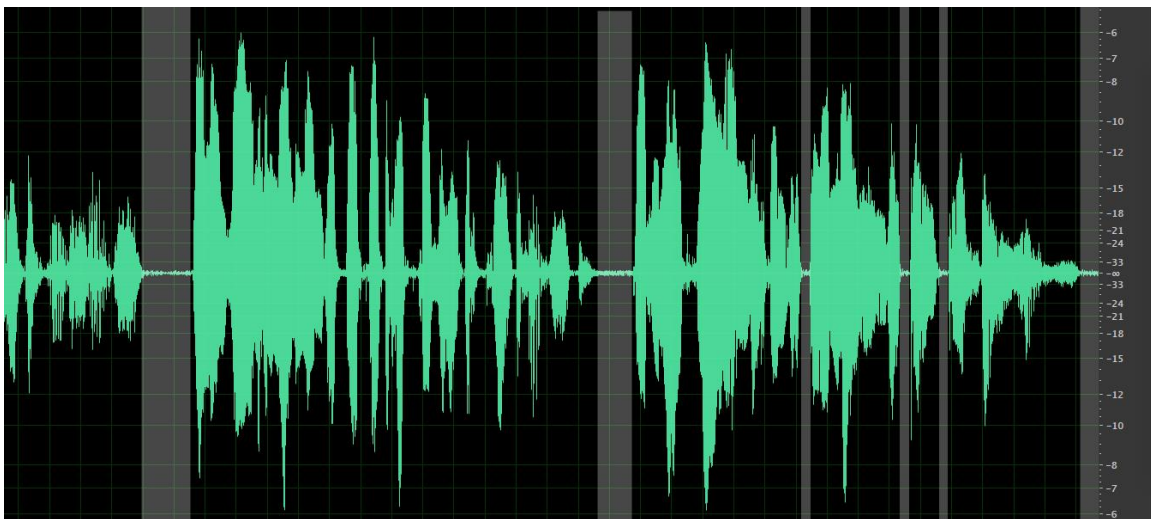
Hiss – Typically a higher frequency (pitch), consistent and steady noise throughout a recording. Think of old tape hiss as an example. This can be introduced into an audio file by boosting the gain by a large amount. This is usually done when the original recording was captured at too low a level.

Hum or Buzz – Typically a lower frequency (pitch), consistent and steady noise. Think of the nasty sound you would hear if an audio connection is not fully connected, or turntable buzz. This is usually caused by a faulty cable or connection, or in some cases a grounding issue.

Noise – Noise can refer to any other constant foreign sound in your recording. This can be a result of a combination of hum, buzz or other environmental sounds. It is important not to confuse noise with sounds that constantly vary in volume and tone. Crowd sounds, room ambience, street traffic, etc... are not noise.

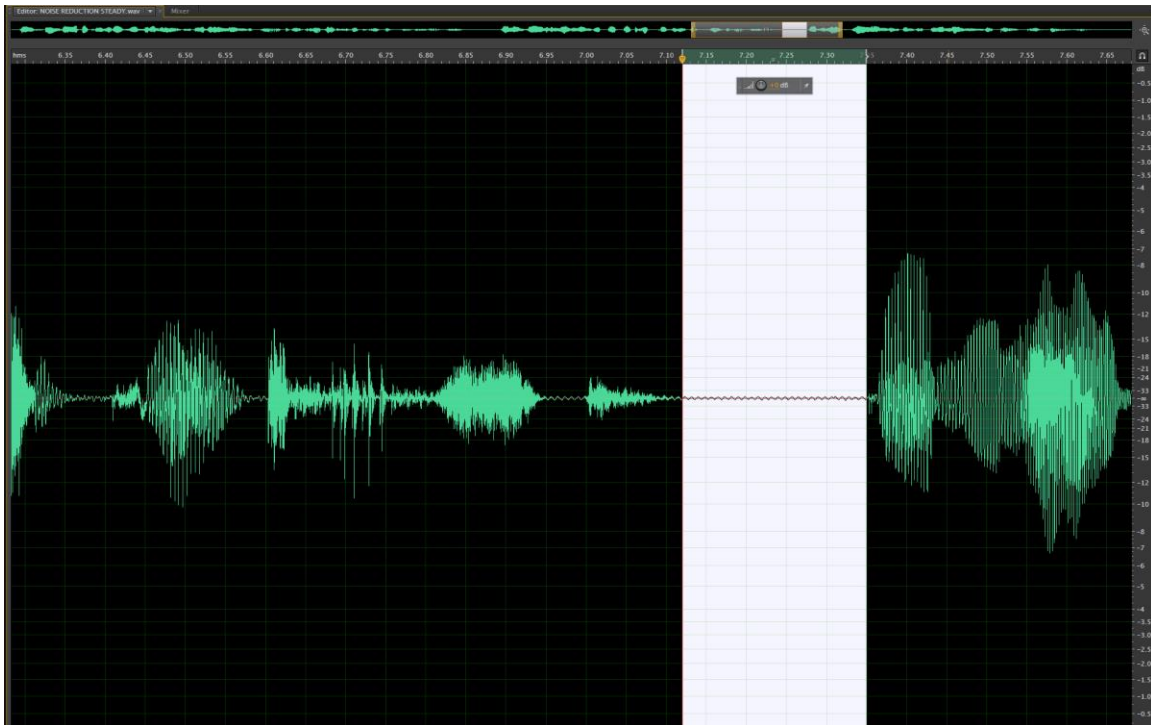
Using the Noise Reduction Tool:

In addition to hearing the noise throughout the file, we will be able to see visible signs of the noise in between the recorded speech.

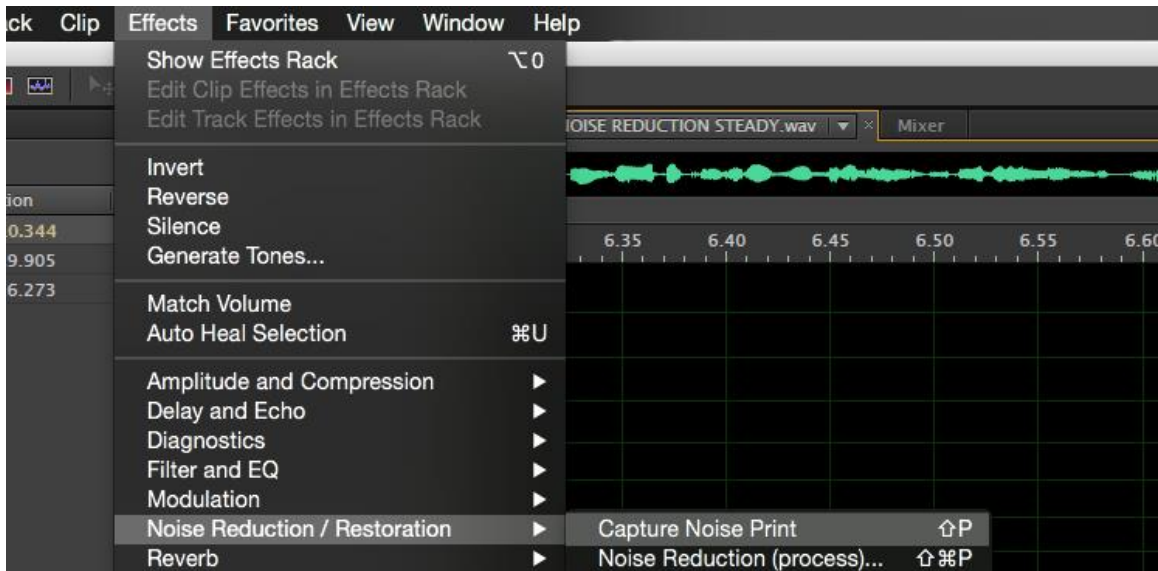


The highlighted sections represent a sample of the noise on its own. We can use one of these instances to select a sample of just the noise for the computer to analyze.

1. Highlight a selection of the noise only. Make sure to avoid any breaths or lip smacks within your noise sample.

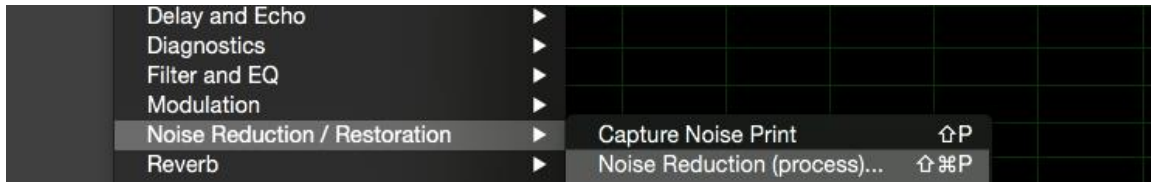


2. Navigate the menu bar to **Effects > Noise Reduction / Restoration > Capture Noise Print**.

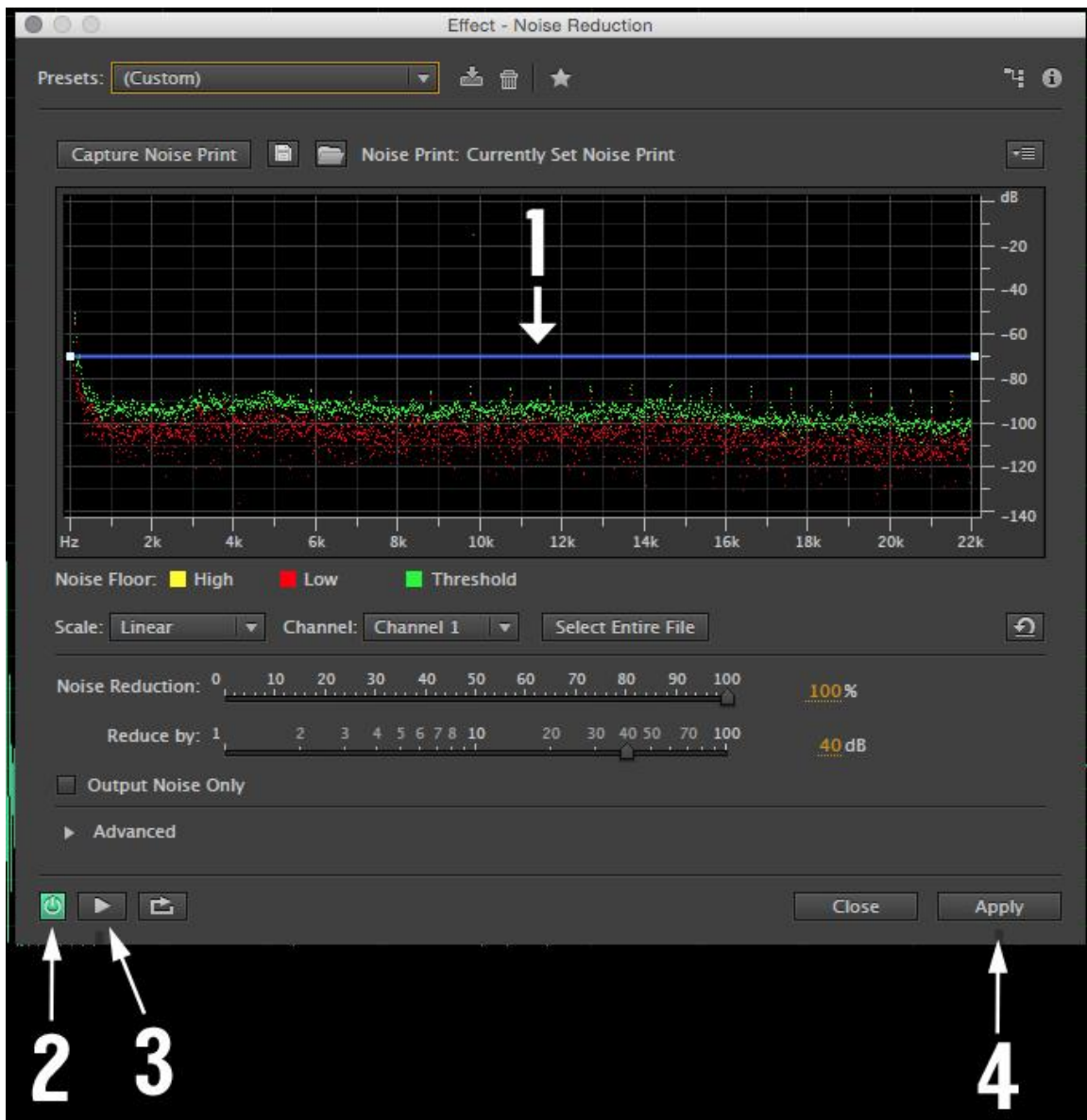


Audition will now analyze your noise, and prepare to remove it throughout the entire file.

3. Highlight the entire file. Navigate the menu bar to **Effects > Noise Reduction / Restoration > Noise Reduction (process)...**



The noise reduction window will open and require some fine tuning to make sure you are not removing the noise while sacrificing sound quality.

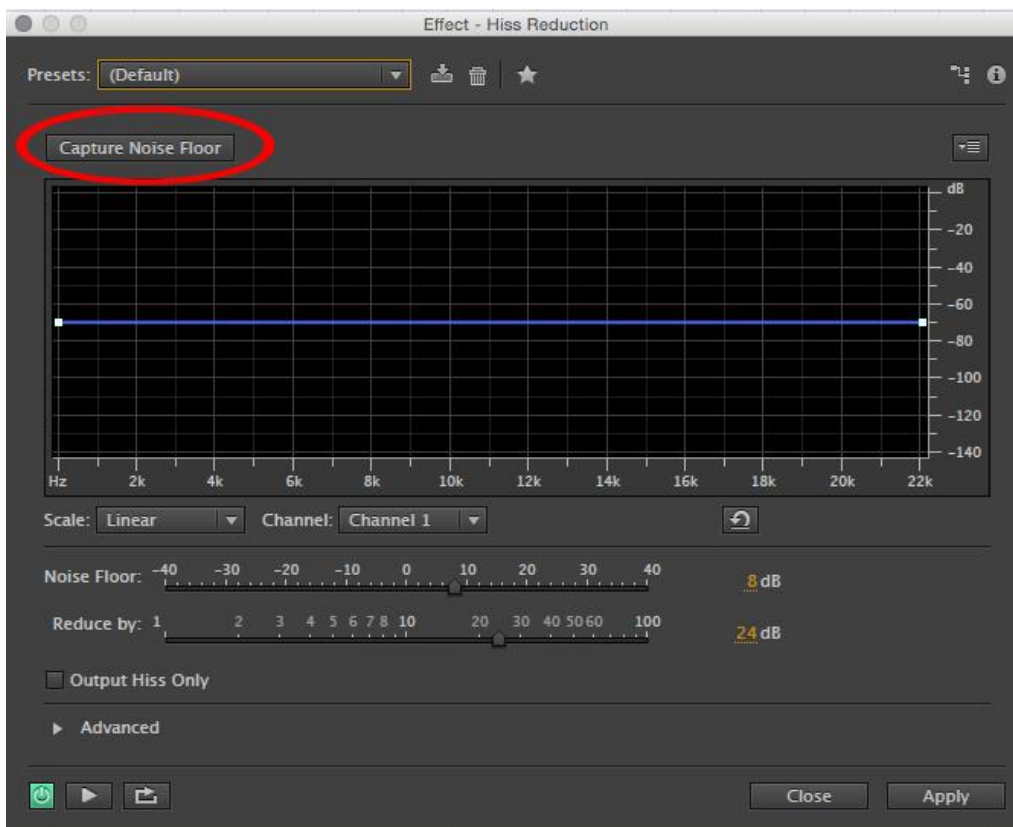


1. This line determines how much noise will be reduced from the actual file. Usually the default setting will be a good level, but it can be raised or lowered depending on how the noise reduction effects the sound quality of the overall file.
2. Turns noise reduction on or off. You can use this to bypass the noise reduction to see how it is effecting your overall sound.
3. Plays the file to test how the noise reduction will sound.
4. Applies the noise reduction to the file.

Make sure you listen to the noise reduction on, and bypassed before you apply it to the file. It is a tool that needs some work to work properly. It is not a magic wand that will remove all noise and keep the rest of the audio perfectly in tacked. Common problems when used improperly are that the audio will sound thin and/or have a noticeable “under water” effect.

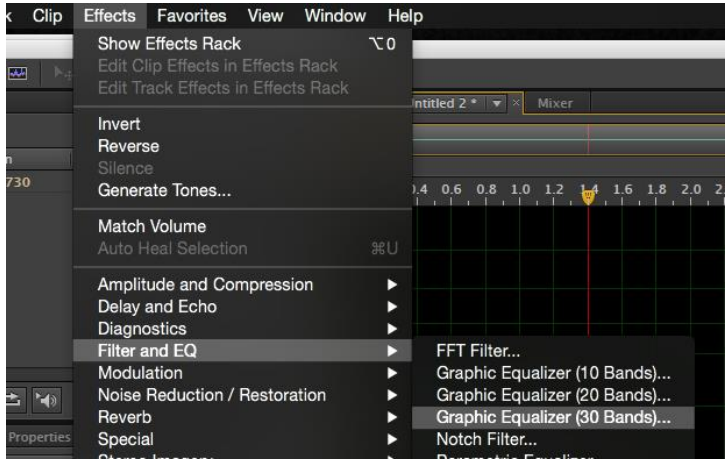
Hiss Reduction:

The hiss reduction works in a similar way to noise reduction. In this case, you can use the “Capture Noise Floor” button to identify the problematic hiss.

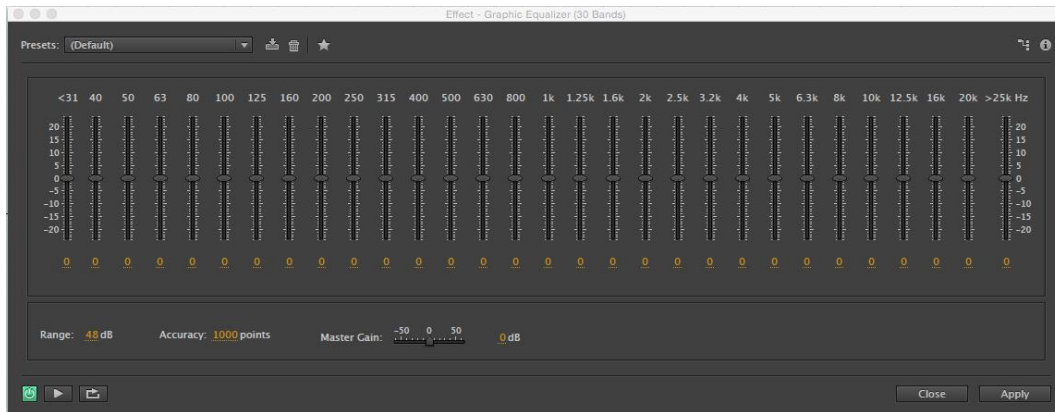


Hum or Buzz Removal

Hum or Buzz is usually frequency based and can be removed using a graphic equalizer. In the Effects Menu select **Filter and EQ > Graphic Equalizer (30 Bands)...**



The graphic equalizer will have individual faders to control the level of precise frequency ranges.



The most common hum or buzz will be down at about 60Hz. Lowering the faders in that range will reduce the hum or buzz. If that doesn't work, try and locate the frequency range that needs to be lowered. Lower pitches will be on the left, high on the right.

