

# NALA'ATSI SOUND ENGINEERING SCHOOL



*"He is not ready... but after part 2 he will be ready."*

## PART 2: SIGNALS, LEVELS, MIC PLACEMENT & MORE

- a) Getting a strong signal (but not too strong)
- b) Which microphone are you going to use?
- c) Mic placement & Pop Filters
- d) Rough/'working' mixes

*But before all of that, quick review of some key terms*

EQ'ing

Signal

Compression

Dynamic vs. Condenser Microphones

Mono vs. Stereo



## GETTING A STRONG SIGNAL:

Getting a strong signal from whatever it is that you're recording is essential - possibly the most important rule in recording. You want a strong signal, but you don't want it to be so strong that you're getting digital distortion. This happens when you are crossing the 0dB threshold, which means your signal is too strong and will cause nasty sounding digital distortion. This is also referred to as being 'in the red.' Your job is to monitor the signal such that it is strong but not clipping.



You want to set your levels in such a way that the loudest parts are just about hitting 0dB. You can use your fader(s) while recording to bump up the signal on the quiet parts, and then adjust down for the loud parts.

If you have a weak or quiet signal you are capturing a lot of background noise, and you will have to bump up the overall volume later which means even more background noise. Sometimes you'll be recording 20-30 different tracks - imagine each of those tracks containing large amounts of background noise - it all adds up, and then your recording sounds like crap.

## WHICH MIC ARE YOU GOING TO USE?

Question 1: Dynamic vs. Condenser?

Question 2: Which specific microphone?

Question 3: How many mics on each instrument?

Choosing the right mic is very much a process of trial and error, but follow these 3 questions as you go along. With a snare, for example, most people use dynamic mics. It's common to have one mic underneath the snare, and one on top. Then you blend these two tracks to your liking.

## MIC PLACEMENT & POP FILTERS

Learning mic placement is a process of trial and error as well, but there are some basic rules that you can follow. Placing a microphone really close to the source, whether that be an amp or a snare drum, is going to capture the immediate sound and not much of the room sound. If you put a microphone snug up to a guitar amp, it's going to capture what's coming out of the amp speaker and little else. If you place a microphone back from the amp 15 feet it will capture some of the ambient noise in the room and some of the natural acoustics, but it won't capture the guitar sounds as crisply and directly. Use your judgement. Maybe you want both - try setting up two mics for the guitar and blend the two tracks as you see fit.

Vocals -you are almost always going to want to have your vocalist sing close to the microphone. You want to capture the voice, not the room sound or other ambient noise, so make sure they're close to the mic.



*If this goat is singing live, there are no problems here. If he's recording he really should be using a condenser microphone and a pop filter (pictured below)*



This is a 'pop screen' or 'pop filter.' It is essential when recording vocals. What is its purpose? “*Plosive*” sounds happen when we say/sing words with the letter ‘B’ or ‘P’ in them. These sounds create loud bursts of air that the microphone picks up, which leads to very noticeable ‘pop’ noises in your recording. Always use a pop filter when recording vocals!

### ROUGH/WORKING MIXES

Everyone is different but most people try to mix a little as they go, so it doesn't sound like total crap and bum everyone out when they're trying to vibe to their next massive hit.

This means doing rough EQing, setting some basic levels (ie making sure nothing is obviously too loud or quiet), throwing in some light effects, and just making sure the overall sound isn't horrendous.

We will be getting a lot of practice with this as we go along.

*Research project: look into each of these effects and learn the basic concepts for next week:*

*Reverb*

*Distortion*

*Delay*

*Gating*

*DeEsser*

*Compression*