

# PATRICE LEWIS CULMINATION PROPOSAL

12/15/18

## Project Background and Description

*For my culmination project I decided to combine the two things that I enjoy doing the most. Those two things are drumming and preparing the sound for live shows. I mixed both my interest as a musician and as a technician together for this experiment. Additionally, micing techniques for live sound has become a popular topic in the entertainment field, it will be a great opportunity to contribute to articles and blogs based on an a an actual experiment. Entertainment magazines such as, "Lighting & Sound America", "Pro Sound News", and "Live sound magazine". I will be demonstrating why certain microphones support various part of the drum kit better than others in both live and recorded sound using FFT analyzer (SMAART), knowledge of polar patterns, impulse responses and recorded data.*

## Project Scope

**i** *I would conduct my first experiment by micing the drum kit using different mics at the same position. Ex: AKG D112 vs. BETA 91(both are commonly used for micing the kick drum) positioned at the kick. I will then monitor and record the frequency response using SMAART an FFT analyzer. In addition to that, to support my thesis I will conduct an experiment placing two mics that are traditionally used for different parts of the drum kit in the same position to examine the difference in frequency response. Example, SM57(common snare mic) VS. AKG D112 positioned at the kick drum.I will also be micing a single source on the drum using various micing techniques and compare the results.*

## GOALS



- *Ability to analyze and compare frequency responses.*
- *Establish the capability to use an FFT Analyzer (SMAART).*
- *Further sharpen audio knowledge to become a better engineer.*
- *Acquire understanding of polar patterns on microphones and their roles in micing an instrument.*
- *Gain a better understanding of sound.*
- *Identify what makes a specific microphone good for that part of the drum kit.*

## DELIVERABLES



- *SM81 , KM184 for overheads*
- *Beta 91 , AKG D112 for Kick*
- *SM57 vs RE20 for snare*
- *SMAART FFT ANALYZER ( software)*
- *CL5*
- *Computer hardware*
- *Adaptation from XLR to USB (mic to Computer)*
- *Measurement mic (earthworks)*