**Guitar Tuner**

**Abstract**

ECE 401/5

05/04/2018

Ryan Dufour - Computer Engineering

Phil Robb - Electrical Engineering

This project is to build a guitar tuner for an acoustic guitar. The device receives an audio signal from a guitar that is sounding only one note, and displays the fundamental frequency of the note being played. The tuner is to be microphone based, as opposed to the clip-on versions that mount on to the instrument. The tuner will calculate and display the fundamental frequency. This display method would be similar to that of commercially available tuners, i.e. displaying on an LCD in conjunction with colored LEDs to determine whether the note’s frequency is too high or too low relative to the desired frequency. The tuner will be limited to standard guitar tuning which is to say the tuning based on the E-minor pentatonic scale. The scale from low sixth string of the guitar to the high first string is E-A-D-G-B-e.

OK AKS 4/2/2018