Looney Tunes

Preliminary Review

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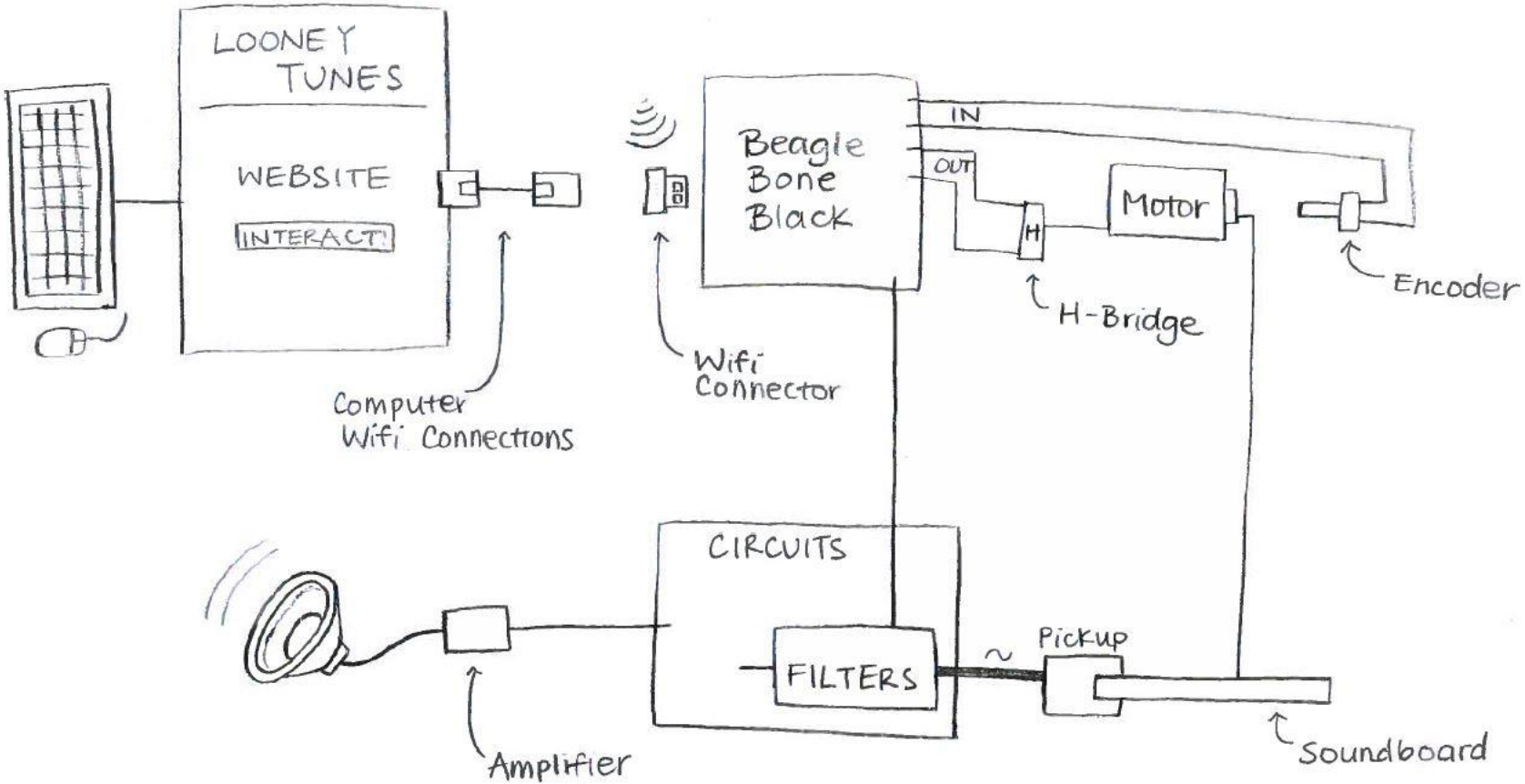
Goals & Design Metrics

1. Create a string instrument that is controlled and played mechanically
2. Capable of playing music that a traditional violin cannot (e.g. chords, large interval gaps)
3. Connect to an engaging interface for the listener to choose songs

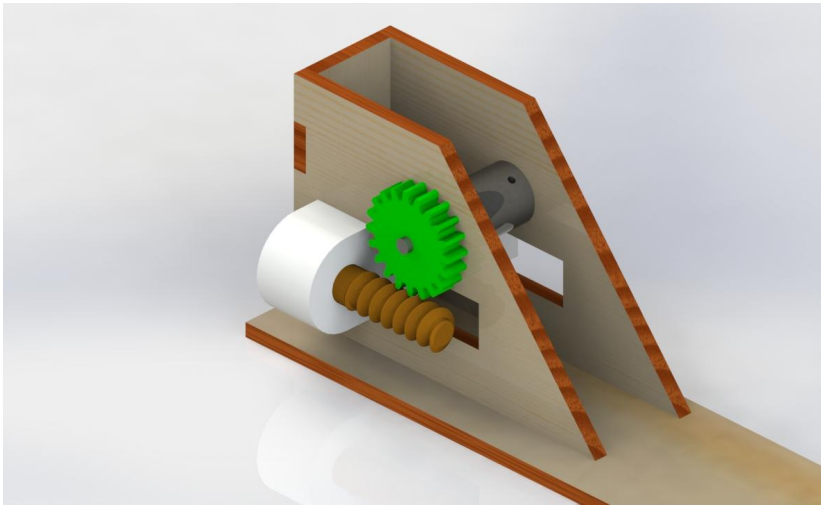
System Diagram



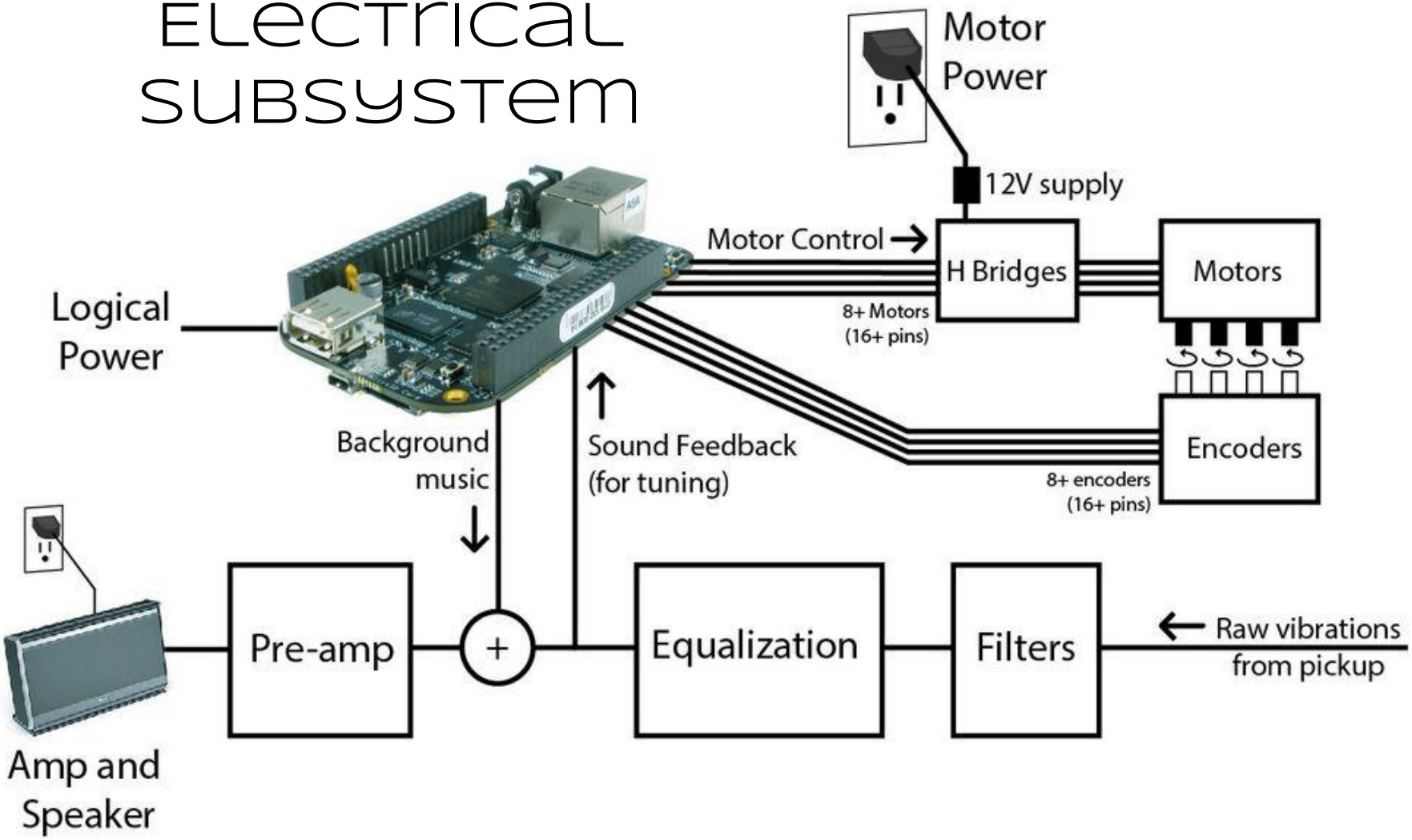
BLOCK CAD

Rough mechanical design

Winding mechanism



Electrical subsystem



Software & Control

There are two control systems. The first is used before playing. The second is used while playing.

Feedback from the amplifier is used to “tune” the string before playing

Control System 1

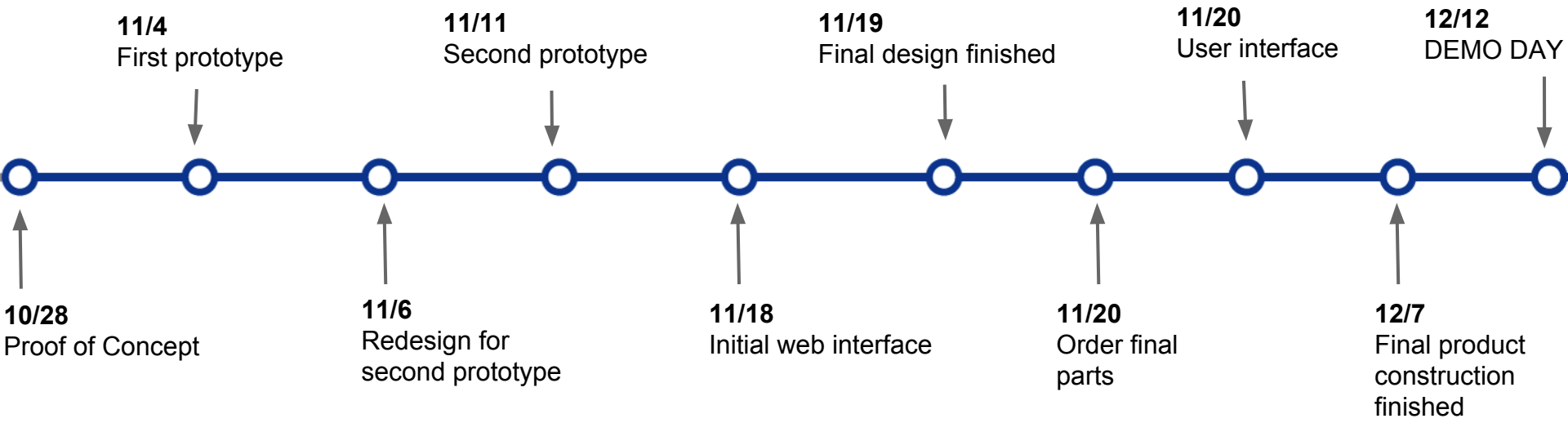
Microcontroller controls tension of the string by moving the motor

Control System 2

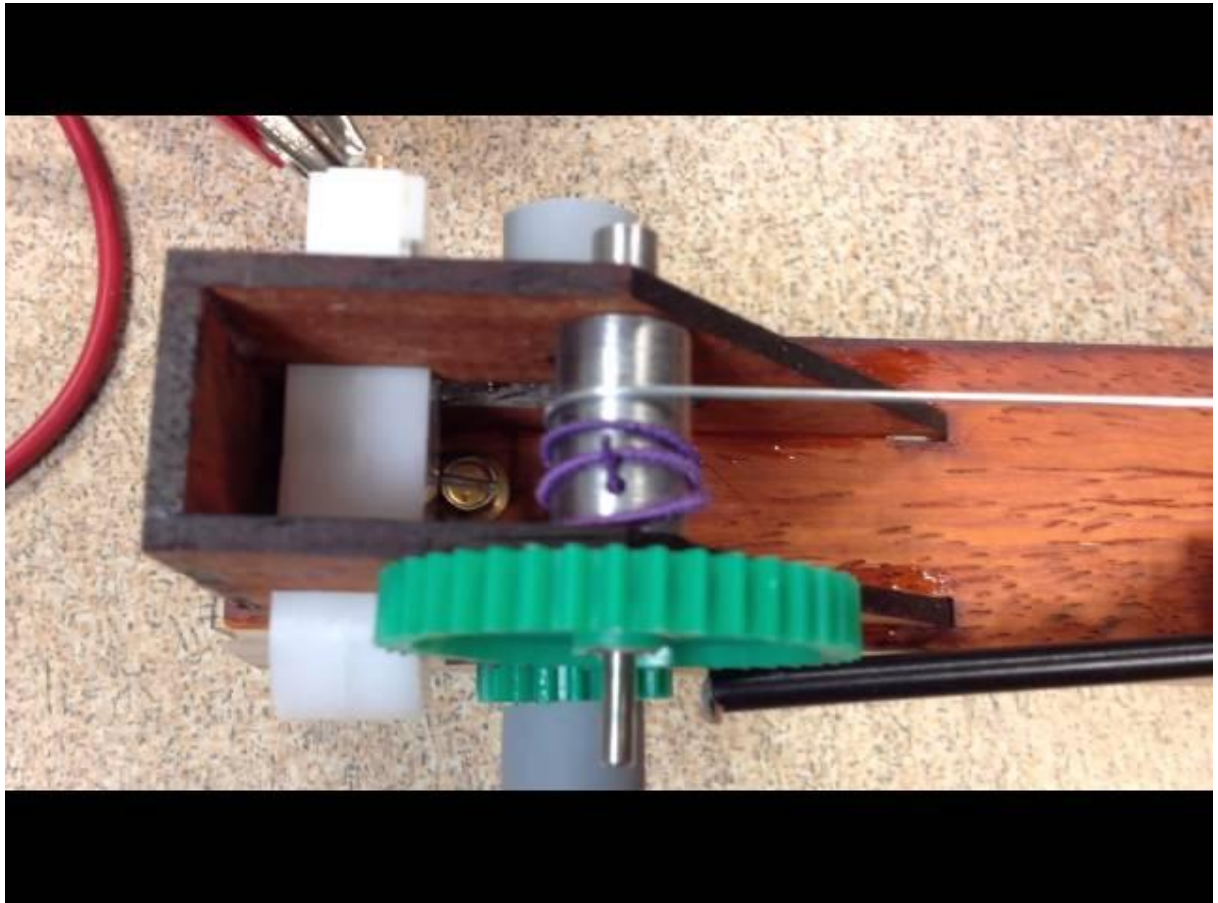
User input (containing what notes to play) is sent to the microcontroller

Encoder is used while playing to correct any error by the motor

Critical Milestones & Deadlines



Proof of concept



Proof of concept

Questions?