Project Title: Music Sculpting: Filtering

Student Name: Austyn Hill, Clare Davis, Chen Li

TA Name: Jenny Lee

TA Signature/Date:

**Design**

- State transition diagrams, Block Diagrams, Code for Sound Control module, SRAM interface module, Video input module, and Input Analyzer module. (Austyn)

- State transition diagrams, Block Diagrams, Code for FFT module, Filter modules and FSM that changes filter characteristics according to inputs. (Chen)

- State transition diagrams, Block Diagrams, Code for FSM that determines access to the right RAM values and display module for music and filter (Clare)

**Functionality**

- Demonstrate correct sampling, storing, and analysis of sound and video input working. (Austyn)

- Demonstrate correct FFT of input, filters (high, low, and bandpass) coefficients, and interface of filters with video input working. (Chen)

- Demonstrate correct video display for music and filter working. (Clare)

- Demonstrate display and sound of correctly filtered input. (ALL)

**Discussion**

- What kind of filters were used and why? How’s various sampling between modules work? What was the most challenging part of your project?