Massachusetts Institute of Technology
Department of Electrical Engineering and Computer Science
6.111 - Introductory Digital Systems Laboratory

Final Project Check Off Sheet

Project Title: FPGA Pattern Sequencer

Student Names: Shirley Fung, Hana Adaniya

TA Name: Jae Lee

TA Signature/Date:

Design

☐   State transition diagrams, Block Diagrams, Code

Interface

☐   Interface displays BPM, and reflects change based on user input (Shirley)

☐   Interface show programmed patterns on screen (16x16 grid) (Shirley)

☐   Beat indicator is shown on screen to indicate current column being played (Shirley)

☐   Screen displays name of each channel (Hana)

☐   Interface displays real-time FFT waveform (Shirley)

User Interface

☐   User can program/store a pattern for each of the 16 sound channels using a row of 16 channels (Shirley)

☐   When the user chooses to play and stop, the loop plays and stops (when play is pressed again, loop restarts and play, corresponding buttons will also be highlighted) (Shirley)

Audio

☐   AC97 interface loops back pre-recorded samples from memory (Hana)

- [ ] 16 audio channels are combined based on user selection using the audio mixer
- [ ] Obtain frequency response of combined audio signal using FFT (Shirley)
- [ ] Audio samples played at varying BPM (Shirley)