Assignment 4 Write Up
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3/6/19

We have used your Livid midi controller for our 4th assignment. Inspired by the many buttons and knobs, not quite a keyboard and yet no so far removed from the concept, we wanted to create an instrument that both conformed to a traditional idea of an instrument (perhaps with the ability to play a major scale) and fell within the digital realm as far as parameters and ambiguity go. Altogether, we used 20 of 45 buttons/knobs on the midi device in order to emulate the acoustic world and still set our digital parameters comfortably.

We have programmed the Livid midi controller to have 3 separate sets of buttons and 3 continuous controls. On the top right are the three continuous controllers. Left to right, these controllers influence attack, decay, and a low pass filter. The first grid of buttons (horizontal on the bottom) dictate the scale degrees that are played, programmed to play the major scale [0 2 4 5 7 9 11 12]. The second set of buttons (vertical on the left), control the key in which the scale degrees then fall within [D A G C mute]. The third and final set of buttons are knobs that act dually as buttons and are programmed as such (horizontal on the top left). They are programmed to change the waveform of the signal from sine to square to triangle to sawtooth (going left to right).

What ended up being interesting was the ease at which we overcame some seemingly-difficult tasks, and the difficulty we have had in what would seem easy (i.e. overall volume control). However, what has struck us as “neat” about the particular product we have created is having a mute button, the ability of the instrument to change to 4 different keys, and the ability to easily switch between waveforms. Finally, the triangle waveform sounds eerily like a flute. Therefore, the music we will play will be a mediocre simulation of some beautiful flute-like music, likely in the key of D, A, G, or C.