Meeting with Schafer 1/16/13

All subsystems should work by the first design review

Schafer has a DSPick microcontroller board we can use

Can get it when we have a cart

We should get a key/card from Natalie

Put the key in a locker we can all get to

Remind Schafer to send article about debouncing keys

Use the 3d printer for making keys?

Prototyping class can train us

Maybe just learn the 3d printer and not the other stuff

Use some keypad to display that we can handle all the keys

Generate DSP things we’ll need the DSPick

For requesting parts, fill out sheet and send to Schafer

Maybe use an audio amp chip

Stereo or mono?

Specify this in our requirements

There’s a list of things Schafer has on sakai

(0805 resistor kits, set of common parts, standard caps, LEDs)

subsystems

power and rechargeable battery

need to find out what battery we need before designing rechargeable

question of how much voltage for audio amp. Can we get away with 5

volt battery? Li ion battery, 7.2-7.4 volts

sound inputs

this can be a software thing?

Button debouncing not included

We just need a system that shows what keys are pressed

We could use the pick it 3, but we need buttons

We should probably use interrupts – less trivial than it seems

key select

user interface

audio output

we should figure this out first

nik looked at sound fonts and they’re like wavetables but they are professional looking

He wants a list of subsystems, hardware and software

When is the first design review?

February 25-March 1

What should we do about the fact that the overtones an octave up(or more) are different than an octave down? Record different sounds? Talk about it later

Action items:

Nik: look into what it takes to do 3d printer

Jake: get a cart

nik and jake: start key input system

nick: start audio amp

zach and Shawn:one big issue is just knowing if we’re gonna be running fast

enough to output audio. We could try just outputting the signal to a

scope. (take what we did on matlab and do it on a microcontroller)

Shawn: key select knob (quadrature square wave), easy separate can be done