EVI Control Parts and Functionalities

* Teensyduino 3.6 microcontroller
  + Direct battery power
  + Native USB host for Midi output
  + 4 Variable touch sensor input
    - Pitchbend pads, Bite Sensor, Extra Modulator
  + 3.3v tolerant only
* MPX5010GP pressure Sensor
  + Needs capacitive decoupling
  + Output to analog input
  + Output into a Schmitt Trigger with variable trigger voltage
  + Schmitt trigger outputs into digital input with interrupt
    - Immediately updates notes
* MPR121 12 port Touch sensor
  + Should each have capacitive decoupling
  + 2 of these to detect all Boolean touch signals
  + 7 for valves and trill valves
  + 6 for octave sensing
  + 2 for multiphonic control
  + IRQ attached to digital input interrupts
    - Only sample IC when IRQ pulled Low
* Joycon Joystick
  + Needs capacitive decoupling
  + Need special adapter to use
  + X and Y analog output
    - For Poramento/Vibrato and Menu Control
  + Switch digital output
    - For selecting 4 way setting and Menu Selector
* 8x8 BiColor Display
  + Should use capacitive decoupling
  + Realtime diagnostic display
  + Displays equalizer/status for pressure
  + 4 way on the go settings changer (customizable in Menu)
* 10k Potentiometer Knob
  + Needs capacitive decoupling
  + Changes which of 4 settings is selected
* I2C FRAM
  + Possibly capacitive decoupling
  + Stores non-volatile data for entire system
  + Alternate sheet for specific location of data
* 128x64 OLED Display
  + Should have capacitive decoupling
  + Menu to change internal settings and parameters
    - Range for all variable inputs
    - Multiphonic mode selection
    - Chord and chord preset selection
    - Breath Curve modification
    - Transposition
    - 4 way settings customizer