

## PSoC 4 Pioneer Kit Community Project#033 – Sweet Music Everywhere! MIDI Shield!

With today's example we are going to make some music. This project uses the Pioneer kit's 5 segment CapSense slider to transmit data to a MIDI device. Touching the CapSense slider in different locations will send out one of several different MIDI note values.

- CY8CKit-042
- [MIDI Shield](#)

### Forum Post Attachments:

At the bottom of this post we are including the following items:

- Example Project Zip File
- Zip File of Images
  - Project Schematic
  - Component Configurations

### Components Used:

The user can download the example project at the bottom of this post. The project uses the following list of Creator Components:

- CapSense
- Control Register
- UART
- CyPins
- CyClock

The components are configured by right clicking on the component in your Top Design schematic view and selecting **Configure**. Please enable the following selections in the Configuration windows for the listed components above.

### Firmware Description:

The main.c firmware is included in the example project. Please review the commented sections for more details.

The firmware takes in CapSense touches, calculating the centroid of the touch, on the 5 segment slider and then transmits a corresponding value to the MIDI deck. The Red LED output is provided as a visual confirmation that a touch has been sensed and a MIDI note sent.

### Hardware Connections:

Simply connect the MIDI shield to the Pioneer board and then connect the MIDI shield to the sound deck.

### Test Your Project:

Program the Pioneer kit and then touch the slider to begin to make that sweet, sweet music.

Have a great day!

<http://www.element14.com/community/message/79786>