Interactive learning system to improve and develop higher keyboard techniques skills.

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Overall Need

- The PT2009X system will provide the user the proper training required to play keyboards via an array of LED’s and graphical display.

Milestones

- Microcontroller Selection  9-10-09
- LED Array implementation  9-25-09
- UART Design             10-17-09
- Display Completed       11-8-09
- Design Assembly         11-27-09
Tasks Completed

• LED Array Interface Design
• Multiplexers ordered/received
• Ordered a VHDL Board for the display
Pending Tasks

• LED-Array Encoder CCT completion  9-25-09
• Research methods for LED strip   9-25-09
• VHDL review and VGA research     9-25-09
• UART Code Design                  10-02-09
Upcoming Tasks

- Continue UART Code Design
- LED Array strip design
- Acquire the VHDL Board
- Continue Web Site Design
Block Diagram

Monitor

Board

Encoder

UART Circuit

15%

50%

5%
Universal Asynchronous Receiver/Transmitter (UART)

- Information comes out of MIDI-Out at a rate of 31,250 bits per second.

- The microcontroller selected for this job is a PIC24FJ64GA002 by MicroChip