

Perfect Pitch Sheet Music Maker

6.111 Final Project Abstract

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This project will allow music to be transcribed automatically. It consists of a microphone, some input switches and a video display. The device will analyze music played into the microphone and update the notes that have been played in real time. The display will show the notes in standard sheet music format. The switches will be used to input settings such as the key or timing of the music.

Initially the device will be made to deal with a sequence of individual notes from an instrument that will give a pure tone (such as a synthesizer). The ability to recognize music from instruments with a richer sound will then be added to the device. Eventually it is hoped that the device will also be able to recognize and display chords.

Other optional features that could then be added include:

- § Synthesized playback of recorded scores
- § The option to input notes directly from a keyboard or midi cable
- § A graphical mouse driven interface to replace the input switches
- § The option to write a midi file containing the score to a flash memory card.

The block diagram for the device is shown below.

