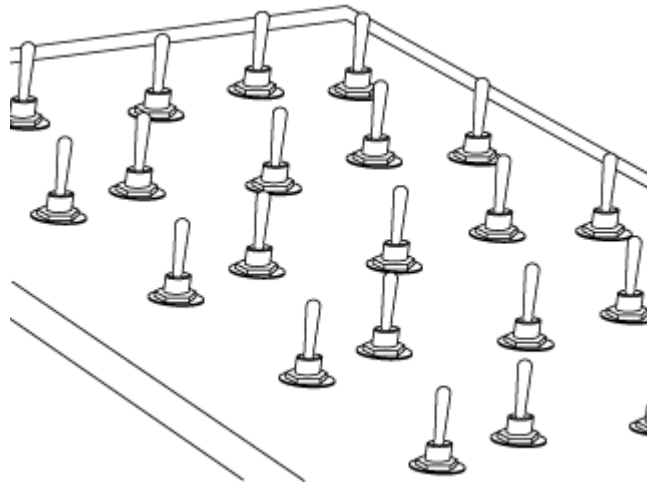


tolerances

interactive sound installation

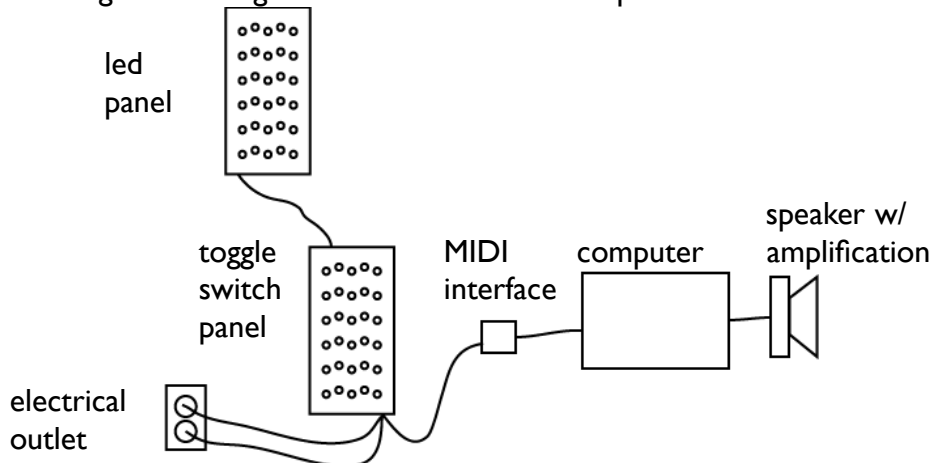
Tolerances takes advantage of slight deviations in mass produced electronics to create complex sonic and visual relationships controlled and discovered by the viewer.



The piece consists of a matrix of flashing LEDs that hangs like a painting on the wall. It is connected to board of toggle switches on a table below. Viewers may choose to alter the sound by flipping toggle switches. The flashes of each LED are being tracked by a computer and triggering software oscillators. The frequency of each oscillator is derived from the frequency at which the LED flashes. Because of the differences in the flashing frequencies, the pitches and rates at which they sound are asynchronous. Patterns are produced by using the switches to let the LED flashes through to the computer and hearing the resulting relationships between the chosen LEDs. When the switch is flipped in one direction every flash of the associated LED triggers a sound. In the other direction the oscillator is triggered every fifth flash. The patterns constantly change as the lights phase in and out of time. The sonic results cover the spectrum from slight syncopation to utter noise.

:|: Technical Requirements :|:

The software was developed in Max/MSP and runs on Mac OSX 10.3.9 (10.4 will probably work but has not been tested). The computer running the software needs to have a MIDI interface to receive LED blinks and an audio output. The setup also requires a small sound system with a one or two speakers. The output from the software is a mono audio signal. See diagram below for basic hookup.



A computer can be provided by the artist if none is available.

The LED panel is mounted to the wall and the toggle switch panel should rest on a table or podium directly in front of it about waist high. All other equipment should be out of view under the table or inside the podium with the exception of the speaker(s) which may be mounted alongside the LED panel or on the table. The volume should be set to a level that does not interfere with nearby exhibits but is clearly audible to users and passersby. Two electrical outlets (110V) are needed for the piece itself with an additional two for the computer and amplification system. The MIDI interface should be powered by the computer.

A small, directional light should be hung above the installation to illuminate the toggle switch panel without detracting from the light of the flashing LEDs.

:|: Space Requirements :|:

Tolerances does not require any special space requirements apart from what was mentioned in the technical requirements. It can be shown in close proximity to other works as long as the enjoyment of those works is not hindered by the audio.

:|: Contact :|:

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