

Project Members

- [Tallscreen](#)

Idea

Originally I created a project which was a bit like windchimes but activated by light. Then I modified it to use water rather than light.

The user moves their hand around in a container of water, which electronically generates the sound of tinkling chimes.

Hardware

This started as something to test a MIDI shield I'd made. Basically, it has a potential divider made of two LDRs, which is connected to an analog-in pin. As you wave your hand over the LDRs it outputs rising and falling MIDI note data.

Since I decided to make this a proper project, I've added two buttons to set the sensitivity limits of the two LDRs (in software).

Also, I've had this plugged into my (musical) keyboard, but the intention is to get a small MIDI sound-module. I've had a look on eBay, and they actually go for more than I expected. Due to my obsession with my projects costing as little as humanly possible, I've decided that a better solution might be to get an old keyboard (with MIDI) and use the innards from that, removing the bits I don't need. The actual PCBs inside these things are remarkably small, and they have built in amps and speakers.

I've now bought a couple of keyboards off eBay for 99p each (the sellers were not happy there *snigger*). I just have to take one apart and see how it's connected up (for power button, etc.). I can live with doing everything (like changing voices) in software, but you still need to press the power button to turn it on.

UPDATE! I've now changed this project to work off water rather than light. There is a container of water with 5V across it. The user puts their hand in the water and completes a circuit by touching a conductor on the edge of the container with their other hand.

The sensitivity buttons were removed because the voltage across the water is constant - unlike when I was using LDRs.

Software

The software reads the input voltage and maps the value onto the note-range of the MIDI sound device.

Also, to make it more like proper chimes, the notes are echoed, and have randomness built into their decay volumes and timings.

Present Status

UPDATE! This was changed to work off water rather than light, and has been finished to a point where it can be exhibited, which it was at FutureEverything 2011

It works, but the electronics are a bit of a mess to look at. They are currently hidden.

I've decided that this is going to be my first project to take the Atmega chip out of the Arduino and into it's own custom board.

FURTHER UPDATE!

This project has now been disassembled! I've decided to take the inner workings and do something else with them. The water chimes were cool, but there were too many things about them which frustrated me, so I'll be modifying the remains into something new.

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