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Project Members

• Tallscreen (see the project homepage for more info)

Idea

A device which plays rhythms on actual percussion instruments, and responds to Twitter messages.

Hardware

The physical device consists of four solenoids (salvaged from HP laser printers) with 'drumsticks' which actually hit the instruments. These are driven from a 24V transformer (salvaged from a Canon printer), and controlled through a transistor interface by an Arduino with an Ethernet shield.

The instruments consist of a cowbell, two bongos, and a larger drum.

The actual drum part has been working for some time now, although I've refined it recently.

Software

Currently, the Arduino sketch holds the rhythm patterns as a string of 16 hexadecimal nybbles, each representing one semiquaver, with each instrument as one bit.

There are multiple patterns, and every bar each instrument chooses a random pattern, giving a huge range of combinations.

The drummer works in one of two ways: Originally it read an online PHP script which accessed Twitter and did most of the processing. Then version 2 did all the processing on the Arduino, so it connects direct to Twitter. For version 3, I'm thinking of going back to reading an external script, so I can incorporate lots of advanced features.

Arduino sketch to follow - soon!

Present Status

The device works fine. It's been shown at Playspace in Manchester, and Maker Faire UK 2011 in Newcastle.

Like I mentioned, I'm going back to reading a PHP script so I can do such things as allowing people to make up their own rhythms and so on.

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