

Project Proposal



We have better tools now than ever to say nothing at all.

The world we see around us in the city is oversaturated by communication from commercial actors. You are faced with signs everywhere you look telling you how you should be and what you should spend your money on.

The signs range from small stickers on lamp posts to huge plasma screens and sheets covering whole facades of buildings. The most visible advertising spaces in the real world are controlled by a handful of corporations maneuvering over national borders to lease these spots, bringing them remarkable revenues. With just a few players on the market, they have the possibility to keep the prices of these advertising spaces out of the reach of private persons and many non-commercial actors. The companies also have a lobby that is actively pushing for a legislation that benefits these companies, such as banning unauthorised posters in public space and unauthorised signage along roads and highways.

The discussion about occupying public space has exploded with the amount of outdoor advertising, but still no concrete improvements to getting exposure for private issues is seen. There are some exceptions, but these face usually issues with availability and freedom of speech. The sole attempt of trying to legally express personal emotions and thoughts in large scale on public property is doomed to fail either by lack of capital or by getting swallowed by the gears of bureaucracy.

Beampad

Portable laser projector for nighttime activism

This project aims to build an affordable tool to easily be part of the visual flood of the cityscape by drawing with light on walls of buildings and other flat surfaces. The device is small enough to carry around with ease and the light source powerful enough to project images in large scale. Interaction with it is intuitional, so that using it does not need any training. Just point and draw and the image is seen.



Beampad is looking like a surveillance camera with a touchpad and two buttons on top. It is also having a strap to make it easy to carry around and operate while standing. The device is turned on by a simple ON/OFF power switch located in the back of the device and there is a LED light to indicate the power state. Once the device is on the user will use the touch pad, like the one on laptop computers, to navigate a crosshair cursor on the projection surface. By holding down the draw button, the user can draw shapes and messages where he is pointing. Pushing the other button will clear the image and a new drawing can be made. To turn it off, simply flip the power switch to OFF.

Technical description

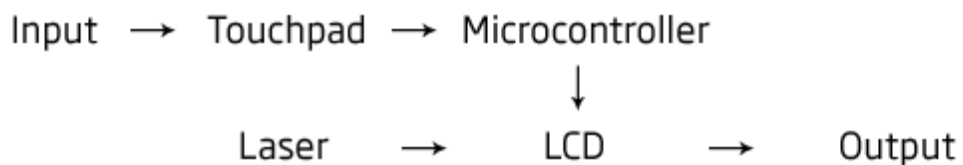
The projector itself is a simple monochrome LCD projector with a mousepad, using laser as the light source because of the power efficiency and no need of focusing the image.



The laser is a 200 mW 525 nm green laser. It is stripped down from a laser pointer and attached to a cooling pad to keep it cool during continuous use. The beam is widened by two concave lenses from camera viewfinders to reach the whole area of the LCD.



The screen is a 128 x 64 point graphic LCD driven by KS0108 or equivalent chip. The LCD is separated from the board, to make it just a partly transparent mask for the beam. It is controlled by a Arduino Duemilanove running a Amtel ATMEGA238 microcontroller. A PS/2 equivalent touch pad and two push buttons are also connected to the Arduino to provide user input to the system.



The software running the microcontroller is composed of open source libraries for running the LCD and reading data from the touchpad and a main program for drawing on the screen and clearing it.