

## Case Study

### Wearable video-graffiti blaster lighting up the streets of Moscow



**Industry:** Art

**Region:** Moscow, Russia

**Type of solution:** Mobile interactive projection-mapped audiovisual art

**Installation:** R▲ is an underground cyberpunk artist, based in Moscow working in 'laser alchemy' and 'info glitch'.

For examples of his work visit:

[http://opacity.ru/VIDEOBLAST\\_R](http://opacity.ru/VIDEOBLAST_R)

**Challenge:** Visual artist R▲ wanted to create interactive projection-mapped audiovisual art using a wearable projection device.

**Solution:** R▲ designed the VIDEOBLAST\_R, a wearable device that projects animated graphics via an ultra mobile Optoma PK-320 projector.

**Results:** VIDEOBLAST\_R's visuals look like hieroglyphics and include looping geometric shapes. The projections work well on walls and other exterior surfaces and objects.

## The Challenge

Visual artist R▲ wanted to create interactive projection-mapped audiovisual art using a wearable projection device.

## The Solution

R▲ designed the VIDEOBLAST\_R, a wearable projection device that allows users to project audiovisual pieces in any outdoor conditions.

It comprises eight vector graphic pieces animated via Processing. Each animated piece can be triggered by pressing buttons on a Nintendo Wii Nunchuk controller. Each visual features sonic accompaniment by sounds from a Cweiman S1 modular synthesizer.

The hardware is fixed to the forearm in true cyberpunk fashion - on a rollerblade armguard and powered by a DC battery, housed in an iPhone armband. The wearable is then wired to an Arduino Uno microcontroller board, while button mappings are processed via Arduino Nunchuk library. The visuals are transferred through USB Serial to a Raspberry Pi 2 single-board computer, with audio and video output via HDMI into an ultra mobile Optoma PK-320 projector.

R▲ explained: “I used to do guerrilla mapping a few years back by uploading motion graphics into my portable projector and taking it to the streets. I always wanted to achieve an additional level of freedom by making it possible to interact with the projection itself. While doing some hobby electronics and device art projects, as well as being inspired by the growing DIY gadgets scene, I came up with this relatively simple design and put everything into this wearable form.”



## The Results



VIDEOBLAST\_R's visuals look like hieroglyphics and include looping geometric shapes. The projections work well on walls and other exterior surfaces and objects.

R▲ said: "I like slightly dimmed daylight (sunset, cloudy days or evenings) as it's dark enough to clearly see the projection but also light enough to see (and record) surroundings."

He wants other artists to use VIDEOBLAST\_R as inspiration for more forward-thinking wearable, projection-mapping video-graffiti units.

The PK-320 is no longer in production but Optoma's ultra mobile LED ML750e projector has been used for similar projects such as the Walkabout Projection from PRICKIMAGE artist, Shaun O'Connor. His bespoke 3D characters are manipulated and controlled using hand gesture technology and projected from this tiny hand-held projector.

Weighing just 380g, the diminutive ML750e HD Ready projector with 700 LED brightness and WXGA resolution, incorporates a media player, native office viewer, built-in speaker and HDMI connectivity.

LED projectors use less energy than traditional lamp-based models and the perceived brightness from LED projectors can be twice that of an equivalent lamp-based model.

Shaun said: "The ML750e had best ratio of size, weight, lumens and power consumption for our needs. As the unit needs to be powered by battery – it was essential we have the most energy efficient solution.

The battery and equipment for the Walkabout projection was installed in a purpose-designed harness that is worn under clothing – so invisible to the public.

Read the full case study:

<http://www.optoma.co.uk/case-studies/192-prickimage-case-study>

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VIDEOBLAST\_R's content sourced from original article on Creators Project:

<http://thecreatorsproject.vice.com>



ML750e



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