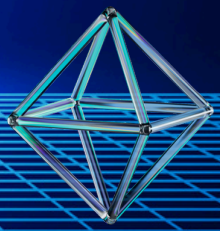


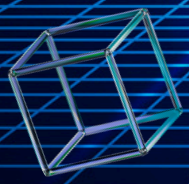
LASERCUBE

EXPLORATORY RESEARCH

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What is the LaserCube?

The LaserCube is a powerful yet portable laser projector designed primarily for musicians, DJs, and live performers. The device itself measures 4 x 4 x 5.9 inches and weighs 4.0 pounds, offering 2-3 hours of battery life. With compactness in mind, the device is capable of delivering impressive visual shows with no maximum range, making it useful for dynamic stage designs. It runs on a system called LaserOS, a user-friendly control software made specifically for LaserCube.

The device is designed for easy use, allowing control from various types of devices, including laptops, iPads, Android devices, and iPhones, without the need for bulky wires or calibration. In the past, laser projectors required extensive wiring and could only be used with PCs. LaserCube simplifies this process. By keeping safety in mind with the use of laser goggles, the LaserCube delivers a modern and wire-free projection experience.

Meet the Client



Chris Gerlach has been an academic professional of the New Media Institute at the University of Georgia for the past 10+ years. He focuses on innovative new technologies, and after acquiring the LaserCube, he has experimented with and used it for stage design events at TEDxUGA. His perspective and experience provide our team with an understanding of the device and a creative challenge; see how the LaserCube can be applied beyond its traditional uses inside the main program.

How do lasers work?

What happens inside the box:

Lasers are generated when atoms are excited and emit photons. These photons then stimulate other atoms around them and create light. Inside the LaserCube, these beams of light bounce back so that the user is able to “draw” with light.

Applications

Artists and performers use laser projection mapping techniques to turn ordinary spaces into canvases for their live show projects. Within entertainment, lasers are used for light shows, laser shows, dance shows, or to provide visual effects for DJs. In the art world, lasers can help create large-scale projections and light sculptures, offering artists a versatile tool.

Trends/Audience

2025 Trends

- AI adaptation – Newer lasers will be able to adjust laser shows automatically based on environmental factors.
- Eco-friendly lasers – Laser companies are looking to make their products more energy-efficient and manage their light pollution.
- AR/VR integration – With AR, users can experience interactive laser shows.
- Better color control – Laser users will have clearer colors and will be able to control color gradients.
- Enhanced safety – Newer laser projectors will have safety sensors to protect the audience even during intense laser shows.

Target users

- Event organizers/Clubs: They could use the LaserCube to create their desired atmosphere.
- Stage Designers: Stage designers could use Ableton Live to sync music with laser movements. They can incorporate these features into productions, shows, and installations on a small and large scale.
- Musicians: Musicians can also use Ableton Live to sync laser movements with their music.

Competitors

1. Spyder Arctic

This handheld laser is a product from the same parent company as LaserCube, Wicked Lasers. The Spyder concentrates a beam of light and creates a dot wherever you point it. The variety of lens caps that the product comes with allows the user to create different types of shapes. As it is an incredibly powerful beam, stuff it in its way, it's prone to catching on fire. Colors are also limited.

2. SHEHDS Constellaser

SHEHDS is a Chinese company that specializes in affordable home-use lasers. The Constellaser is priced at $559, compared to the LaserCube at $ 3,599. The Constellaser device is bigger than the LaserCube, and it does not have an app that is made for the device. The lasers are clear but not as defined as the LaserCube beams.



From official Wicked Lasers website



From official SHEHDS website

Inspiration



From Dan Flavin's official website

Ableton Live

Ableton Live is a software for macOS and Windows that is primarily used for songmaking. It's used by musical artists to arrange noises and audio into a song, and it is compatible with instruments. Specifically with LaserCube, we could use MIDI control. MIDI Control syncs external devices to music from Ableton and synchronizes the lasers to the beat of the music.

Art Installations

Dan Flavin is an American minimalistic artist who uses simple lights and lasers for his artworks. He often combines inanimate objects and lasers to create colorful reflections. Drawing inspiration from Flavin's works, we could try and incorporate shapes and objects into our laser show and experiment with the results. Flavin creates soft washes of colorful, reflected light, which could be a way we could try a different route compared to the LaserCube's bright and clear beams.

Inspiration cont.



From Resolume VJ's official website

Resolume VJ

Resolume VJ is a software mainly used for video layering and effects for live production. The software in particular that would align with the LaserCube is Resolume Arena, a program that can control lighting. With LaserCube and Resolume Arena, we could find more ways that we can control the laser without relying on the default assets on LaserOS. We could potentially layer multiple lasers for a visual effect, which was not possible with LaserOS.

TouchDesigner

TouchDesigner is a visual programming language that runs on Windows and macOS for video installations, real-time effects, and video elements synced up to your music. Like Resolume, it's used by many video jockeys. With the LaserCube, we could sync up music and sounds with the animations that we build or find out how to make interesting effects with the software, things that we can't do with LaserOS.

Sources

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