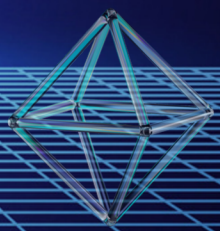


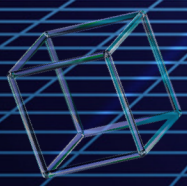
LASERCUBE

SETUP & BEST PRACTICES

NMIX 4410

FALL 2025





Sam Levy | Michelle Ung | Stella Yoon | Nathan Cheong | Evelyn Flores

Setup Instructions

How to Set Up the LaserCube Ultra 7.5 W

In depth YouTube video below:



Setup Instructions

1. Put the LaserCube on the tripod
2. Connect the ethernet cable to the LaserCube and your laptop
    a. *A wired connection to a computer works best*
3. Connect XLR cable to the Remote Stop button
4. Connect Remote Stop button to LaserCube
5. Take out two keys
6. Put one key in the Remote Stop button, turn the key to align with the green dot
7. Put the other key in the LaserCube and turn
8. Turn on the LaserCube
9. Remove the lens cap
10. Press and hold the Mode button, wait for light to flash
11. Single press mode button to toggle through modes
12. Find LAN mode (yellow light), press and hold until flash stops to select it
13. Press the Start button on the Remote Stop, wait 5 seconds
14. Laser OS should go from “No Laser” to “Laser Off” to indicate that a connection has been made
15. Start projecting your designs!

More Information

The best setup is on a computer, plugged into a power source, and physically connected to the LaserCube. It appears to render best this way as opposed to connecting via the LaserCube wifi network.

File Exporting

While LaserOS supports various image formats such as PNG and JPG, importing any file type other than SVG or ILD is **NOT** recommended, as other file types tend to render poorly both in LaserOS and its resulting projection by the LaserCube.

To export SVG files, they must be named in a sequence where the prefix is the same and the suffix is the frame number. For example, “Sequence_01,” “Sequence_02,” “Sequence_03,” or “NMI-01,” “NMI-02,” “NMI-03.” For the best render quality for SVG animations, toggle on “ILD” when importing into LaserOS.

Creating Assets

Creating Assets

After developing an idea for an animation, you can then begin creating assets and animating them in the program of your choice. The team preferred Blender, since it can create both 2D and 3D animations.

There are various ways to make assets in Blender, so just have fun with it.

For the assets involving a premade logo:

1. Import an image to use as a reference
2. Add a plane
3. Change from object mode to edit mode
4. Extrude lines into the reference image until it appears like the reference image
5. Create animation using asset
6. Export as SVG
7. Done

Safety Measures

Epilepsy & Visual Media: What Designers and Laser Operators Need to Know

What Is Photosensitive Epilepsy?

Photosensitive epilepsy is a type of epilepsy where seizures are triggered by visual stimuli, especially flashing lights, rapid patterns, or high-contrast animations. About 3% of people with epilepsy are affected by this.

Visual Triggers

Epileptic seizures are most common at flash frequencies between 3 and 30 Hertz (Hz – flash per second) and up to 60 Hz. Rapidly alternating patterns, especially stripes, bars, or geometric shapes with high contrast also are more likely to cause seizures. Avoid designs that contain these features.

Best Practices

- Avoid flashing content
- Provide a content warning
- Avoid animations that flash more than 3 times per second
- Prefer fade-based transitions to slide-based transitions

Sources:

- https://www.epilepsy.com/what-is-epilepsy/seizure-triggers/photosensitivity
- https://www.angelinipharma.com/expertise/brain-health/epilepsy/photosensitive-epilepsy-light-triggers/
- https://digital.accessibility.princeton.edu/how/content/animations

LaserCube Designs + Best Render Quality

Floating NMI 2D

- Render Quality: 0
- Global Power: Up to 100%
- BPM: 80 BPM

Floating NMI 3D

- Render Quality: 0
- Global Power: Up to 100%
- BPM: 80 BPM

NMI Cube Dance

- Render Quality: 0
- Global Power: Up to 100%
- BPM: 160 BPM

Jumping Cube NMI

- Render Quality: 0
- Global Power: Up to 100%
- BPM: 100 BPM

LaserCube Designs + Best Render Quality

Spinning Cube

- Render Quality: 0
- Global Power: Up to 100%
- BPM: 50 BPM

NMIXpo

- Render Quality: 0
- Global Power: Up to 30%
- BPM: 60 BPM

Rock Lobsters Claws Up

- Render Quality: at least 0.9
- Global Power: Up to 50%
- BPM: 75 BPM

Rock Lobsters Clawdius

- Render Quality: 0.9
- Global Power: 60%
- BPM: 95 BPM

LaserCube Designs + Best Render Quality

Static NMI Logo

- Render Quality: 0
- Global Power: Up to 100%
- BPM: --

Spinning NMI Logo

- Render Quality: 0
- Global Power: Up to 90%
- BPM: 105 BPM

Floating NMI Logo

- Render Quality: 0
- Global Power: Up to 100%
- BPM: 100 BPM