ENR355 Laser Cutter Tutorial

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Spring 2026

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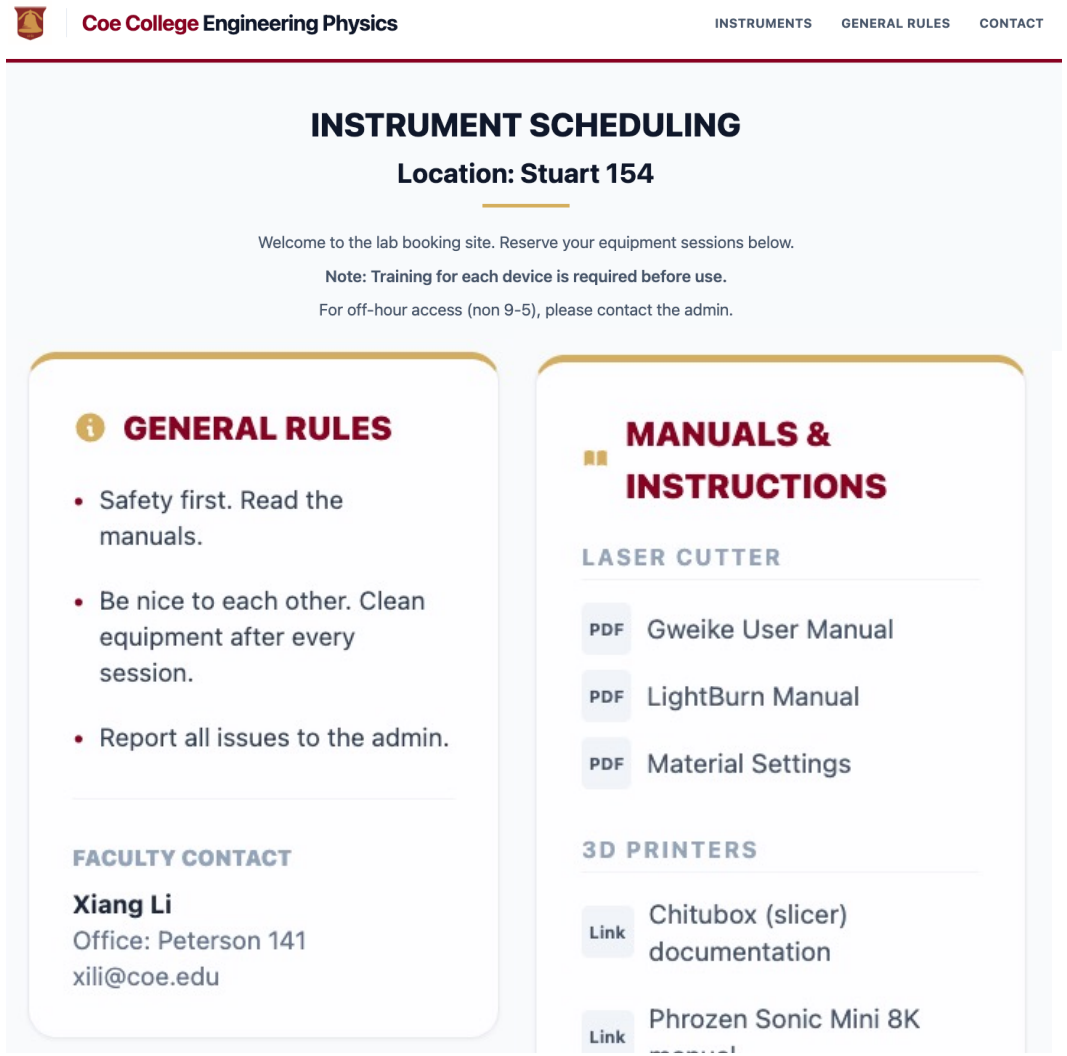
Scheduling site:



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Current laser cutter:

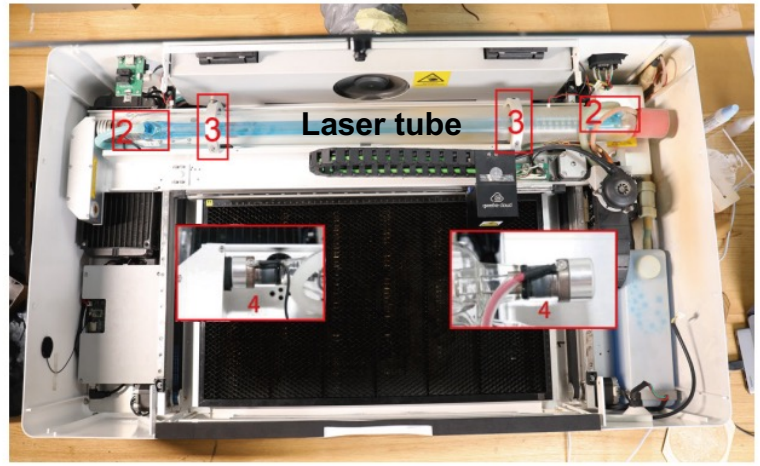
Carbon-dioxide laser

Article Talk

From Wikipedia, the free encyclopedia

The **carbon-dioxide laser** (**CO_2 laser**) was one of the earliest gas lasers to be developed. It was invented by Kumar Patel of Bell Labs in 1964[1] and is still one of the most useful types of laser. Carbon dioxide lasers are the highest-power continuous-wave lasers that are currently available. They are also quite efficient: the ratio of output power to pump power can be as large as 20%. The CO_2 laser produces a beam of infrared light with the principal wavelength bands centering on 9.6 and 10.6 micrometers (μm).

POWER	550W
Voltage	100-240V
Circuit Current	13amp
Bandwidth	50hz/60hz



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Laser safety

- The laser cabinet has safety interlocks that turn the laser off if any access door is opened during operation.
- Never operate the laser system with an access panel removed.
- The visible red dot is not the real laser, but it is still potentially harmful if beamed into the eye directly.

- DO NOT disassemble the machine or remove any of its protective covers while the unit is plugged in.
- DO NOT attempt to defeat the door interlocks.
- DO NOT view directly into the beam of the Laser Diode Pointer (Red Dot Pointer).
- DO NOT operate the Laser Diode Pointer (Red Dot Pointer) without the machine's focus lens in place. If the unfocused beam strikes a reflective surface, it could be directed out of the cabinet.

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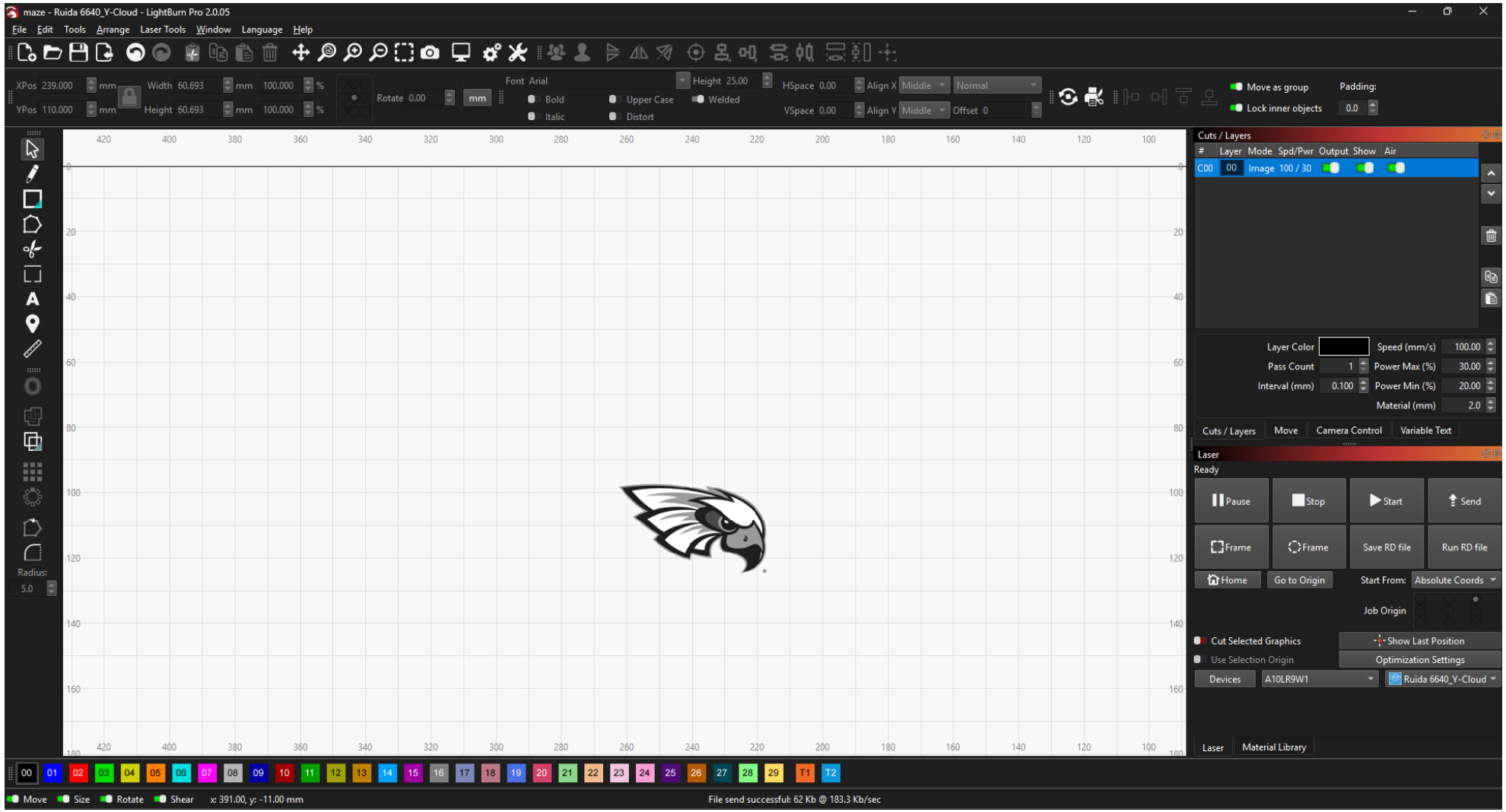
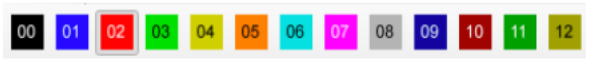
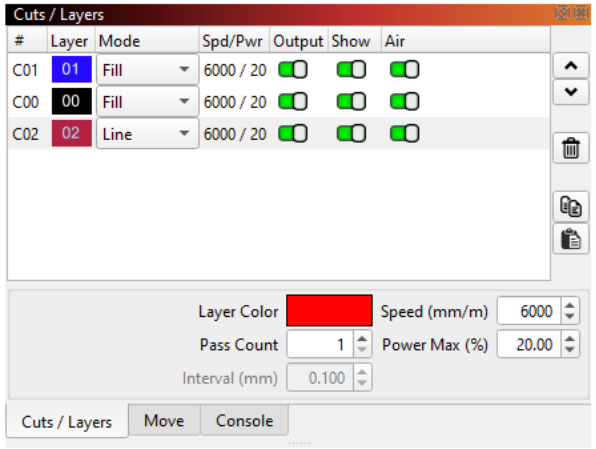
Thanks to the Physics Department

LIGHTBURN
BETTER SOFTWARE FOR LASER CUTTERS



Lightburn tutorial

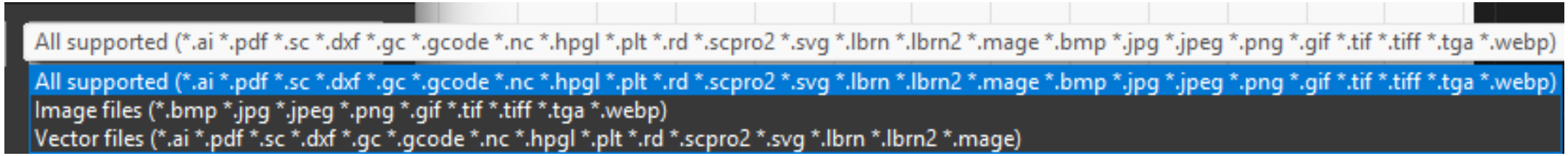




- Lasers don't print in color, so these colors are only used to assign different kinds of operations to the shapes in your design.

- You assign different mode to each layer for line/fill tasks.
  Line = Cut: laser power ↑ laser speed ↓
  Fill = Draw: laser power ↓ laser speed ↑

- All supported formats:



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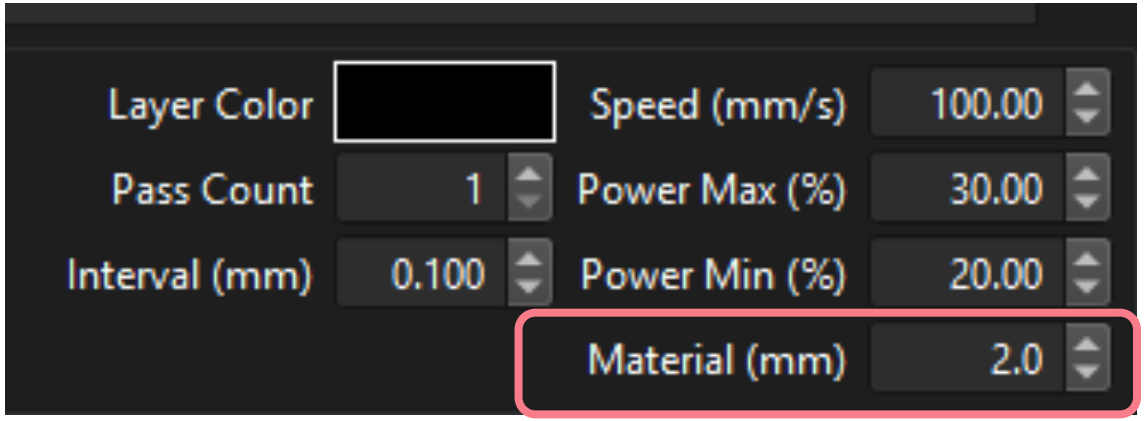
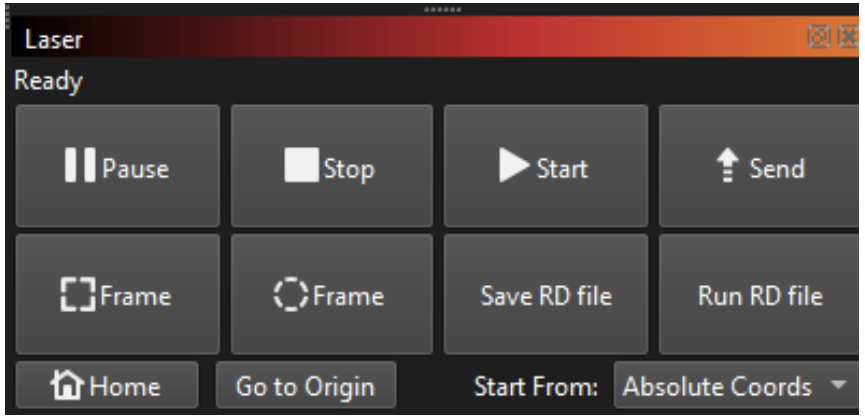
Then you set:



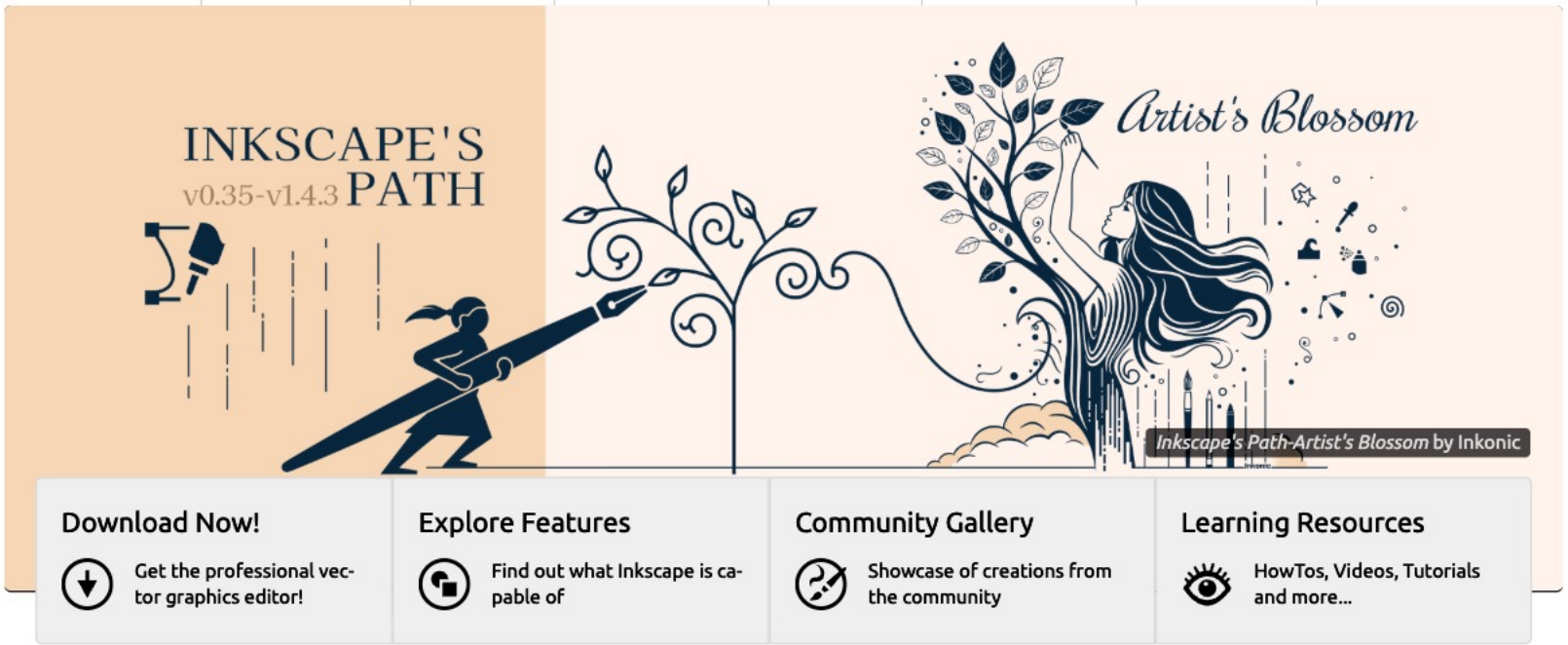
The laser head will hit the base if you got this number wrong.

And you burn:



Draw 2D SVG graph:

https://inkscape.org/ https://inkscape.org/learn/



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