Improving Image Fidelity By Lowering Power

A simple, easy way to improve the quality of a laser engraved image is, many times, just to reduce the max Etch Power. Try it and see what happens!

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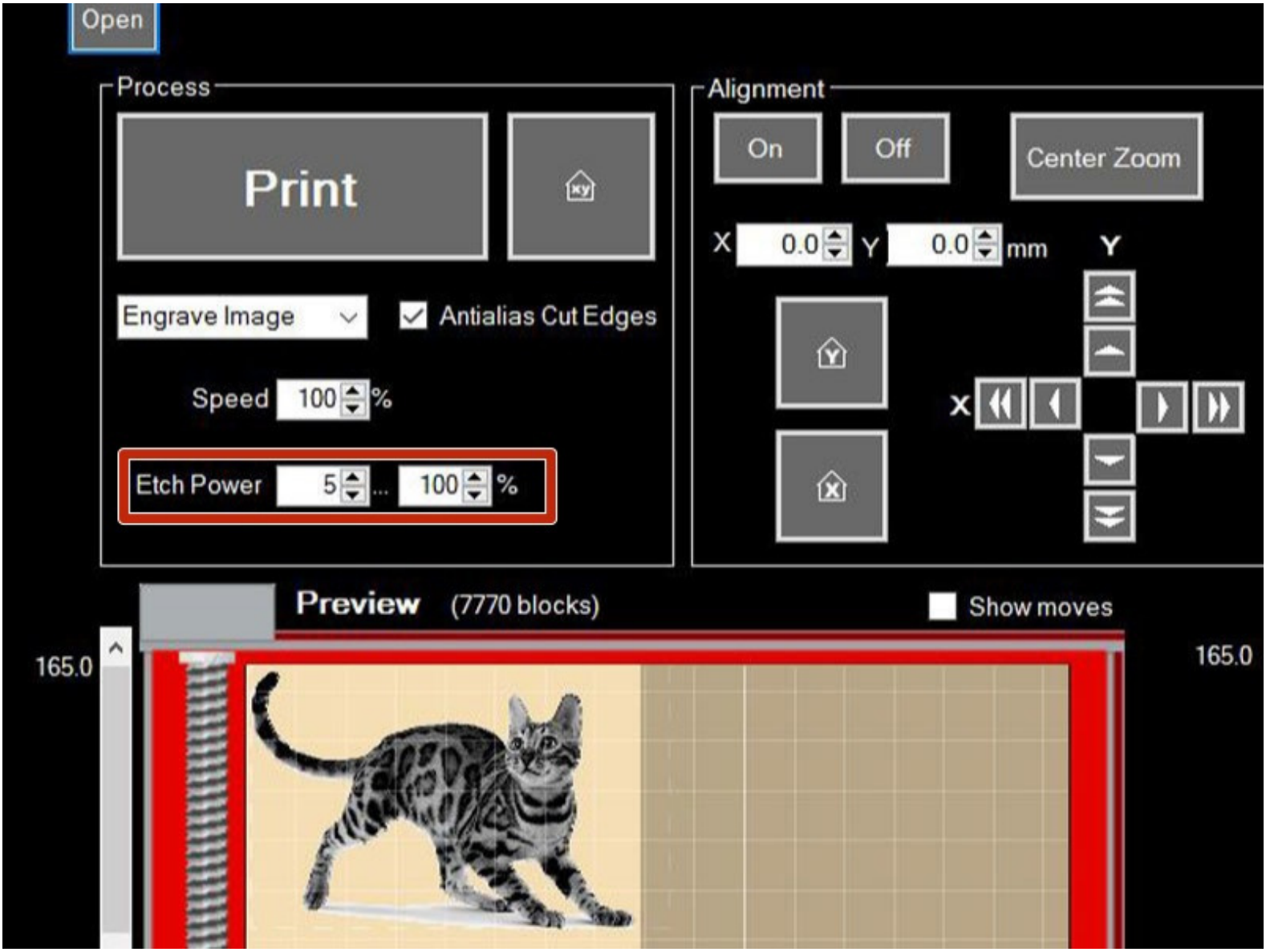
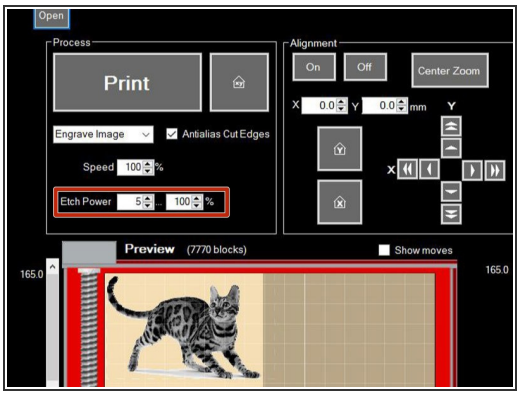


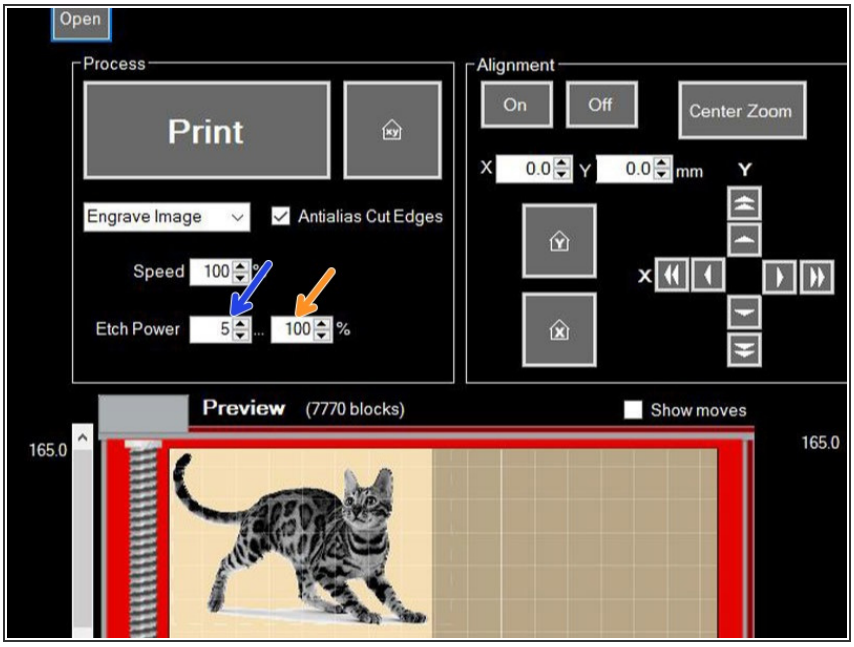
Step 1 — Engrave You Image At Stock Settings.



- BoXZY is capable of etching in incredible detail. So, when detail is missing, modify your settings starting with "Etch Power".
- Notice the second example image . It is rich in detail and texture. The third example image is what happened when I tried to engrave that image at max Etch Power, which is our stock setting. the image lost all detail. So I know that my power settings are too high.

ⓘ Why does increasing the max etch power decrease the fidelity of the engraving for some materials? Answer in Step 2.

Step 2 — Understanding Etch Power



ⓘ Notice that Etch Power provides you a range of values by percentage. This is a percentage of the total power that BoXZY's laser is capable producing.

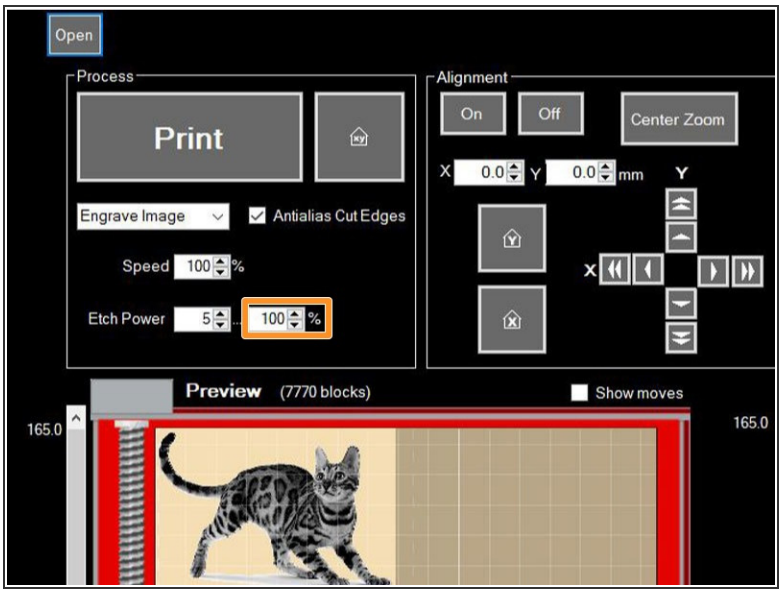
- Setting the lowest range, the left box, establishes the lowest laser power that BoXZY will turn on. In the example it is set at 5%. So when BoXZY sees the lightest pixel in your image, it will engrave

that pixel at 5% of the max laser power that BoXZY is capable of producing.

- Setting the highest range, the right box, establishes the highest laser power that BoXZY will turn on. In this example, it is set at 100%. So when BoXZY sees the darkest pixel in your image, it will engrave that pixel at 100% of the max laser power that BoXZY is capable of producing.
- Increasing the range of values, increases the diversity of power ranges BoXZY can produce. The highest range of values would be 0% to 100%.

Answer To Question In Step1. Each material that you engrave has a point where it becomes the darkest it can be. When you increase the upper range of BoXZY's laser output, you create a higher amount of variations of high laser output. Sometimes this creates a range of values that are just black because even the lowest output creates black.

Step 3 — Reduce Max Etch Power.



- Reduce the max etch power. It's highlighted in orange. When I experiment with values, I decrease this percentage by 20 at a time at first. So 100% becomes 80%, and if that doesn't work, 80% becomes 60%.
- Notice the incredible change in detail in the second image. The top cat is just black. No detail. This was done at 100% max Etch Power. The bottom engraving was engraved at a max Etch Power of 50%. The only change between these etchings is the max Etch Power.

ⓘ This took merely a couple minutes of tuning. With some real thought and additional adjustments, the definition can be even more dramatically improved

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