

LASER MATCH OVERVIEW & ADJUSTMENT

Overview

Laser match is responsible for the laser firing in the same spot on the table whether the lens carriage is moving from the left or right side of the engraver. The left-to-right and right-to-left passes should be aligned laterally, with the end of the left-to-right stroke aligned with the start of the right-to-left- stroke.

Using this method you will engrave a piece of anodized aluminum using a low resolution setting. This will allow you to see the individual pulses of laser and how the left-to-right and right-to-left passes align.

When to Check

- If engraving appears blurred and the x-axis components (IKO rail/linear guide, belt tension, belt condition, optics) have been identified as being in good working order.
- If you suspect that a user has changed the laser match setting.

Required Materials

- 4" x 4" (100mm 100mm) piece of anodized aluminum

Recommended Materials

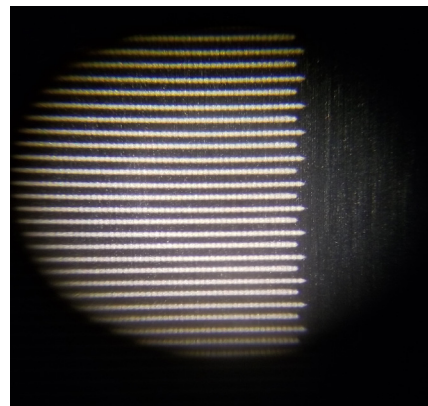
- Loupe, magnifying glass, or microscope

The following procedure only applies to Fusion Maker, Fusion Edge, and Fusion Pro engravers running firmware version 1.0.6.0 and greater.

1. Open your preferred illustrating program and create a 1" x 1" black filled box.
2. Set up the job with the following settings
 - Recommended speed and power settings based on material (anodized aluminum is recommended)
 - Dithering set to "none"
 - Resolution of 75 DPI
3. Send the job to the engraver.
4. After the job is complete, remove the material and observe the engraving.

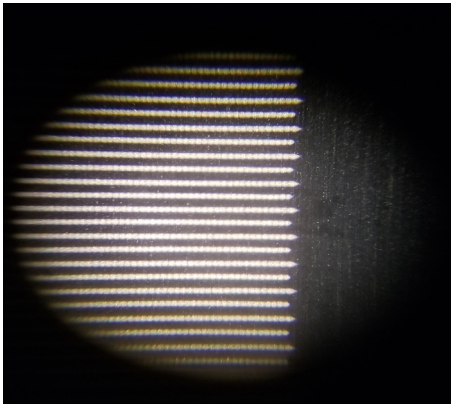
When laser match is properly set, the left-to-right and right-to-left passes should be aligned laterally, with the end of the left-to-right stroke aligned with the start of the right-to-left- stroke

An Edge 12 with a default laser match (LM) setting of 100 was used for the following example. For the images, the laser match setting was adjusted from 50 - 150 before running a 1" x 1" box. A magnifying glass with 10X magnification was used to inspect the engravings.

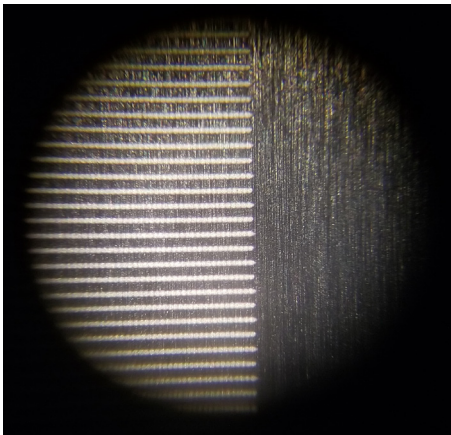


The box above was run at LM: 50

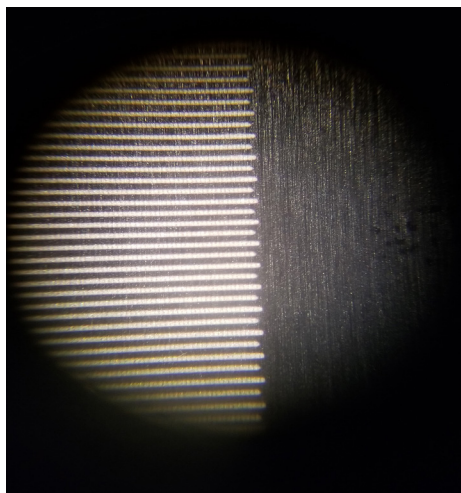
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The box above was run at LM: 75



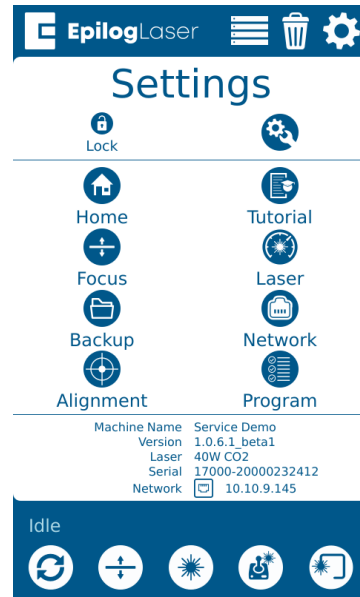
The box above was run at LM: 100



The box above was run at LM: 150

Adjusting Laser Match

1. Press the “Gear and Wrench”  icon to access the engraver settings:

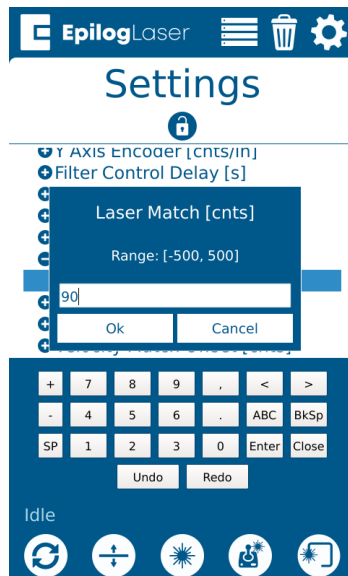


2. Expand the System Settings:



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3. Press “Laser Match” and a dialog box will appear: Enter the new laser match value and press “Ok” to save the change.



Smaller and negative laser match values will move the left-to-right passes to the right.

Larger laser match values will move the right-to-left passes to the left.

4. Repeat steps 1-4 of the procedure, making any further adjustments as needed.

Default Laser Match Values

Model	Laser Match
Edge 12, 24, 36	100
Pro 24, 36	100
Pro 32, 48	180

If further assistance is required, please contact Epilog Laser Technical Support by email at tech@epiloglaser.com, or by phone at 303-215-9171.