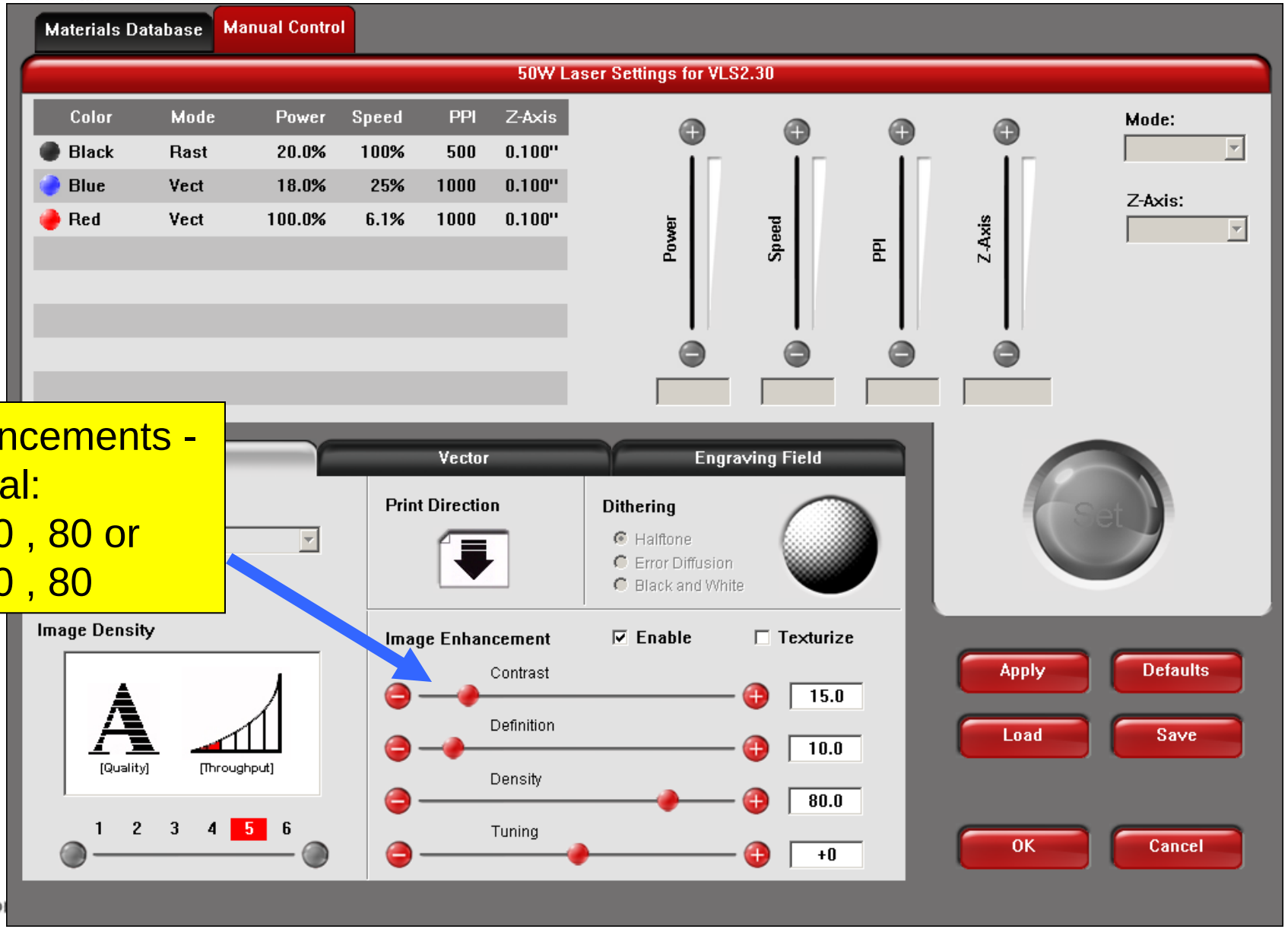
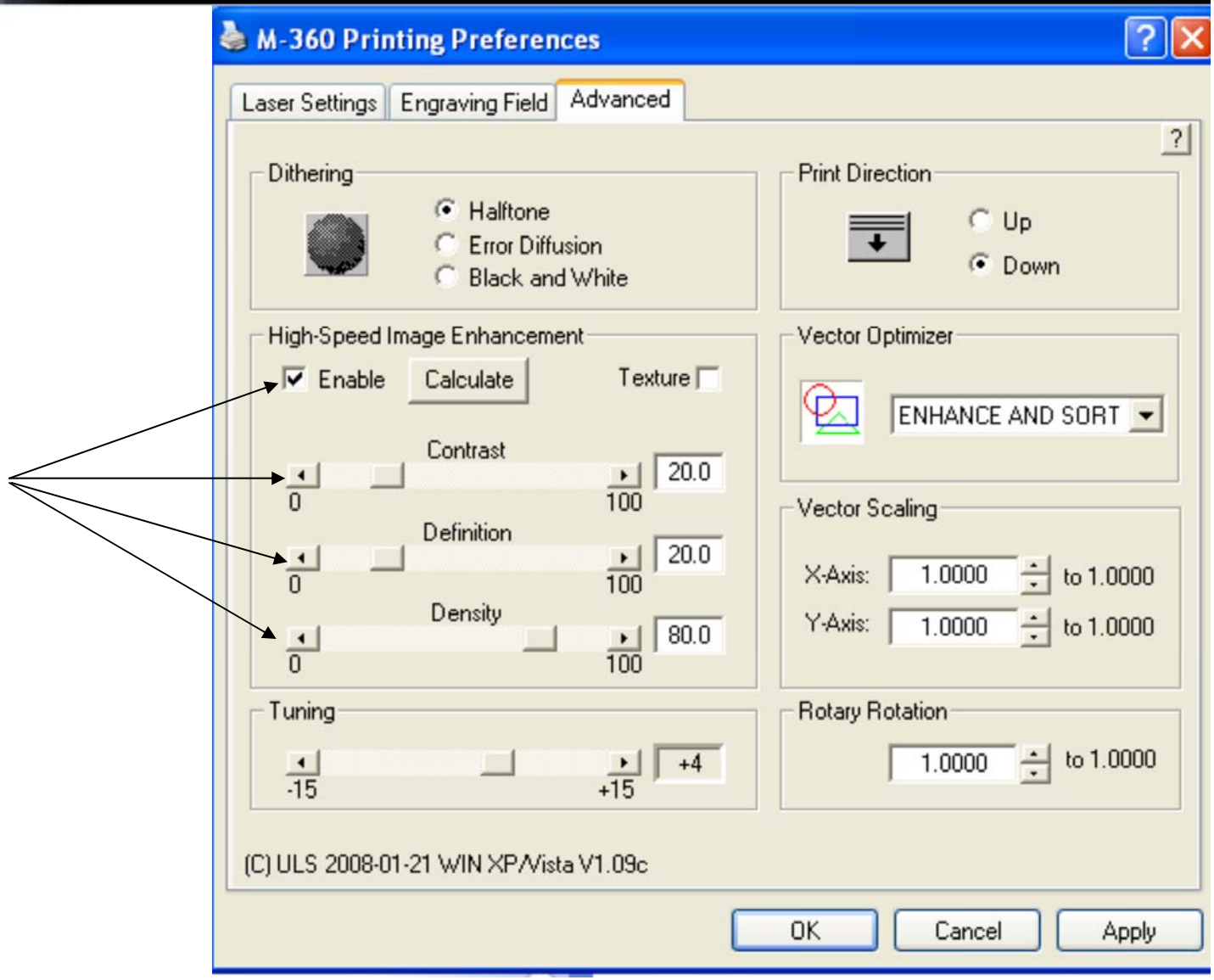
Enhancement Controls



Enhancements - Typical:
10, 10 , 80 or
20, 10 , 80

Enhancement Controls

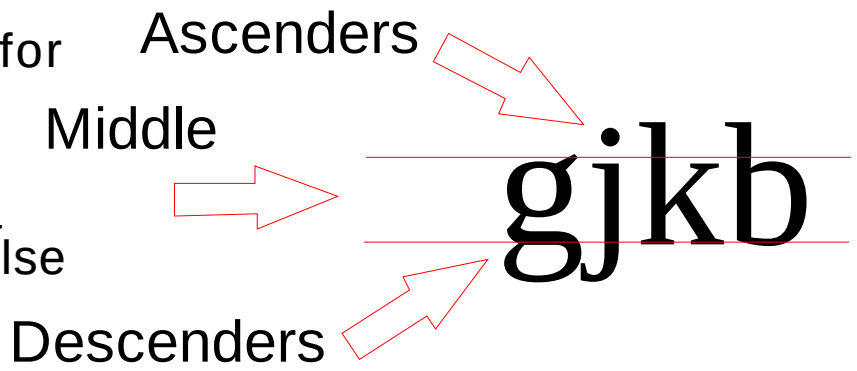


Enhancements

Benefit: Greatest accuracy for high-speed, low-power engraving

Three settings:

1. **Contrast:** Optimizes laser pulsing for middle of text
2. **Definition:** Optimizes ascenders & descenders (#1 & #2 above add pulse stimulation for bolder result)
3. **Density:** reduces stimulation everywhere to make characters thinner if needed



gjkb

When to Use:

- Small features at high speed and low power on materials like anodized aluminum, coated brass, acrylic, plastics
- Do NOT use on photographs
- Not needed at high power (90 – 100%)

Enhancements

1. Contrast – increase to add laser stimulation in concentrated areas (middle)

2. Definition – increase to add laser stimulation to ascenders and descenders

3. Density – decrease to reduce laser stimulation and reduce overall boldness

Enhancement Example

IMAGE ENHANCEMENT

ANODIZED ALUMINUM 6 POINT FONT, TIMES NEW ROMAN

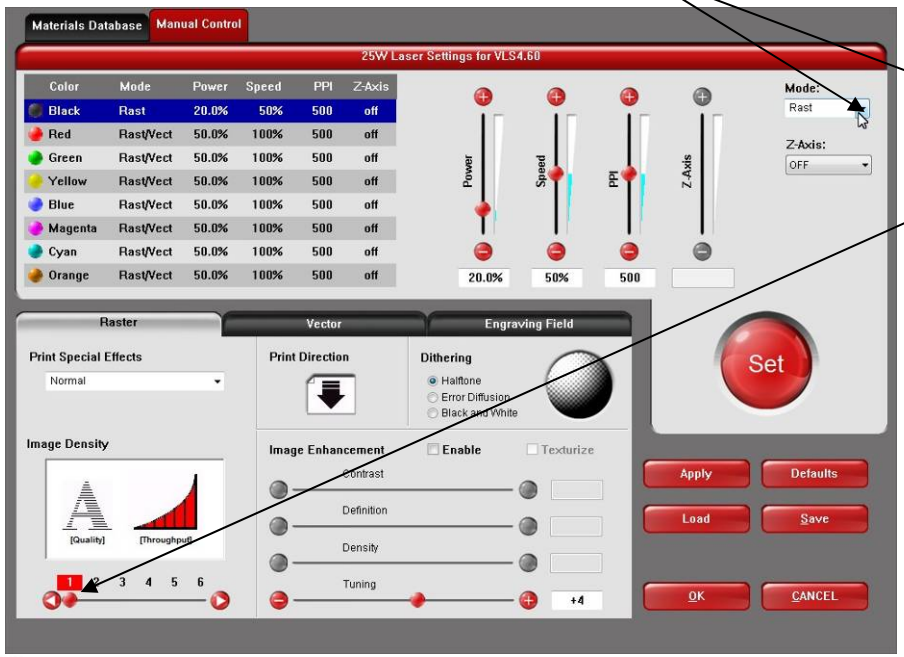
MAGNIFIED 15X

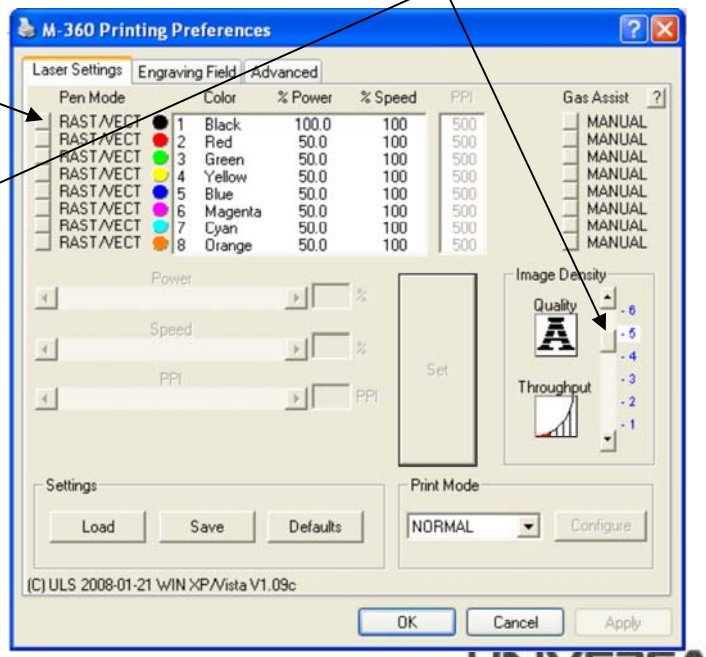
RUN ON A 50 WATT AT 100 % SPEED!

Tuning your Laser

- Draw some black vertical lines in your drawing program, print job to laser
- Force the engraving to “Rast” or Raster only and engrave at Image Density 1 or 2

Force “Rast” Image Density 1 or 2

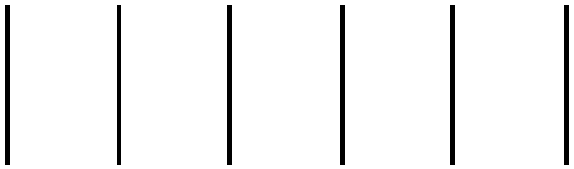




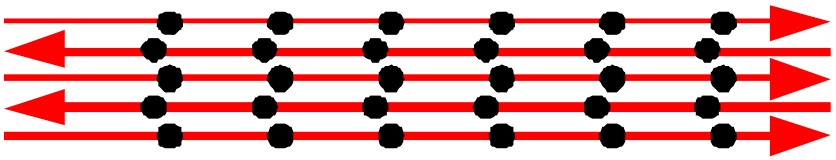
Tuning

- Engrave vertical lines (must be raster mode)
- Materials like Plastic or Anodized work best
- Tuning adjusts timing of pulses to motion system
- Adjust value in driver up or down

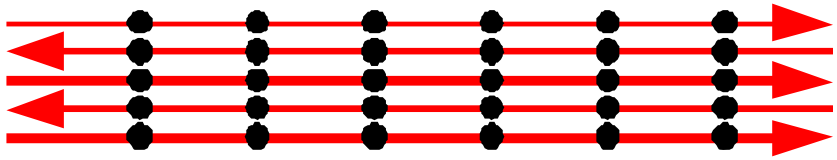
Example vertical lines sent to laser for raster tuning test



Laser not in tune - dots not aligned during left & right strokes

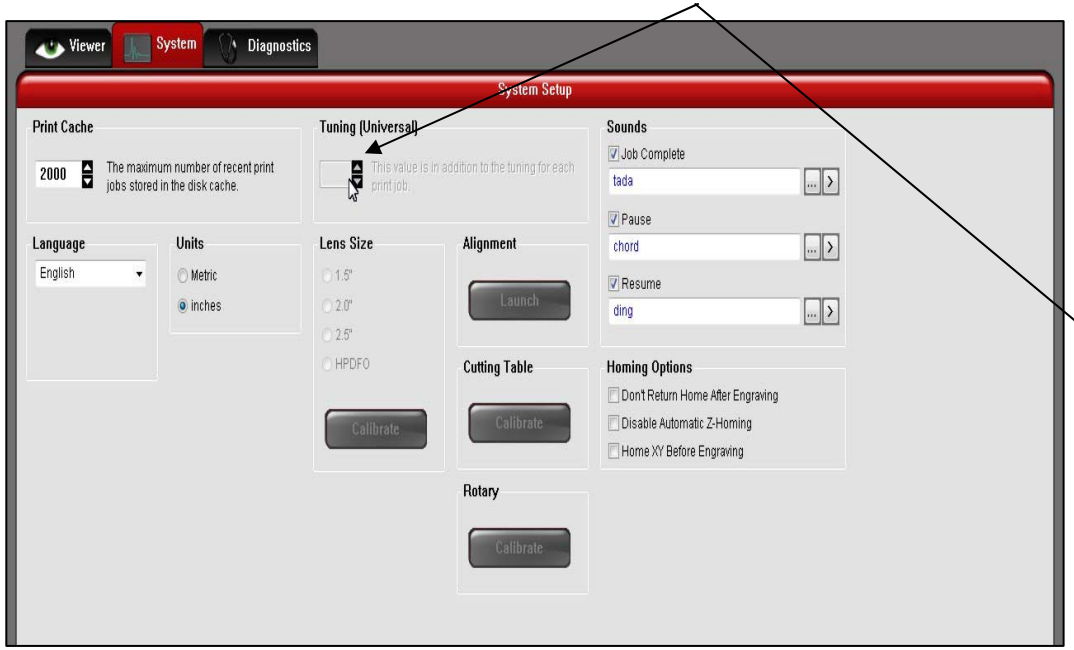


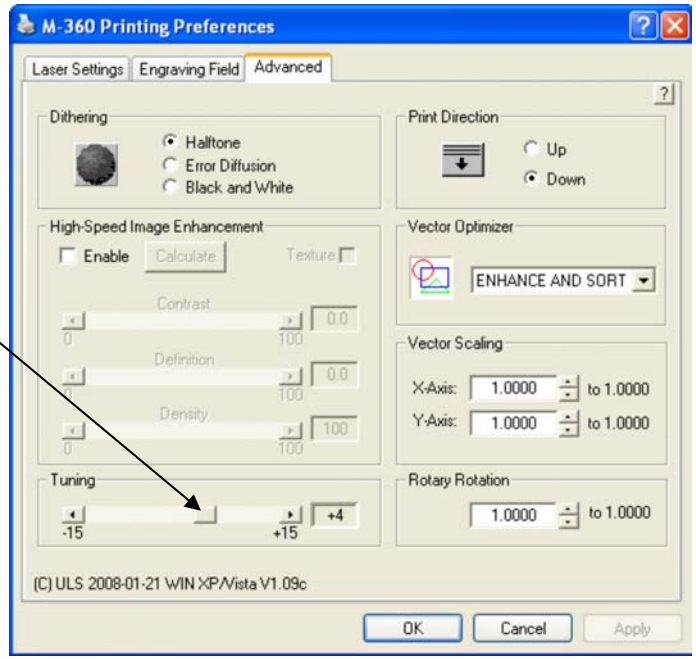
Tuned laser - dots align



Tuning

- Engrave lines, adjust tuning in the Control Panel until the lines are straight
- Typical tuning values are from +4 to +10

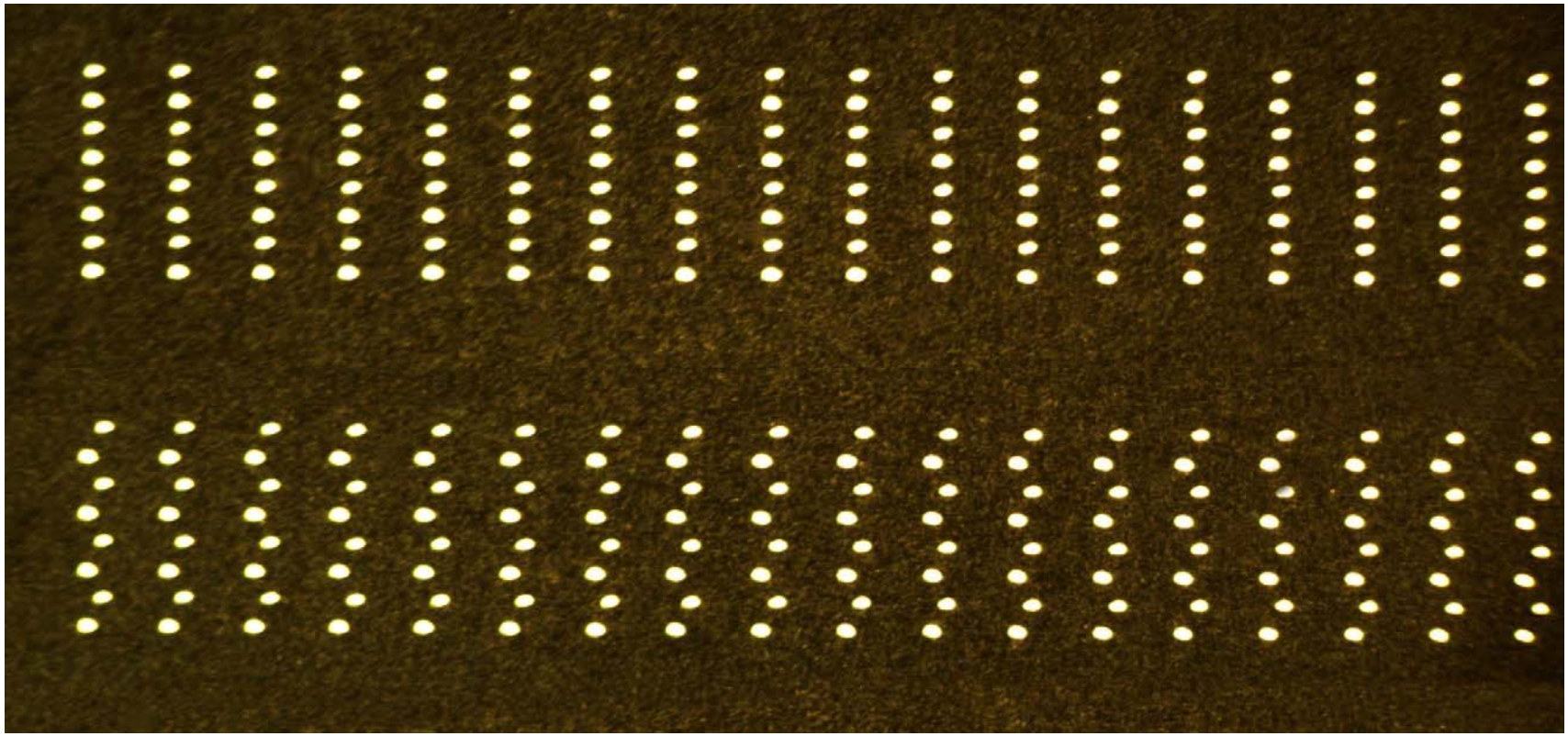




- Control Panel (system Tab) on VLS, PLS and ILS
- Advanced Tab on all other models systems

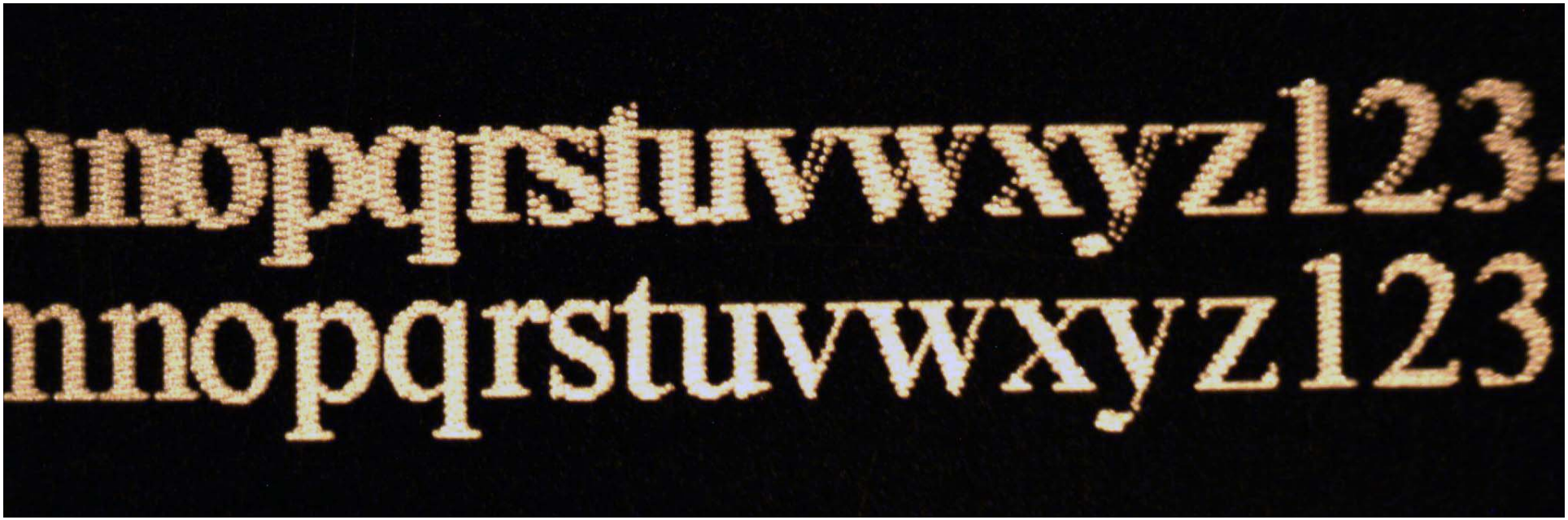
Tuning Example Pattern

- Sample engraved at 100% speed Image Density 1
- Top rastered and tuned at +5 (Correct tune)
- Bottom rastered and tuned to -4 (Incorrect tune)



Tuning Example

- Top Text: Out of Tune
- Bottom Text: In Tune
- 6 Point Font Magnified 15 times
- Engraved on Anodized Aluminum



Tuning Recap

- Simple procedure, assures quality
- Adjusts laser pulse timing for raster engraving
- Can compensate for belt wear, motion system wear
- Should be checked every 6 months on standard use
- Do not to use the same spot on the work table all the time; the tuning value will then be different on other parts of your engraving field due to belt wear