

## Image Enhancement

These controls allow the user to “fine tune” the image which will enable the laser system to produce the highest quality, highest detailed images at high or low speeds. Image Enhancement may be used at any engraving speed and with any application material.

The following procedure may appear lengthy, but when you actually learn how to use the controls, establishing the correct parameters is easy and quick. Once you have established those parameters you can “SAVE” them in the ULS printer driver as .LAS settings and recall them when needed. Many users choose to name these saved setting according to the application material’s name. Before stepping you through the procedure we must first

### Definitions

***CONTRAST:*** Adjusts the difference between the unengraved and engraved areas in the high density part of the graphic or where there is the most concentration of graphic pixels (in between the dotted lines) as the following diagram illustrates:



Within this effective area, using too little CONTRAST may cause some parts of the letters to appear thin, faint, fuzzy, or even non-existent. Having too much CONTRAST will cause the effective area to appear thick, bold, or over powered.

***DEFINITION:*** Adjusts the difference between low density and the high density part of the graphic. The low density part of the graphic can be considered such as the ascenders and decenders of text, or single pixels that may be horizontally spaced far from other pixels, or the start of the graphic in the direction of the raster stroke. Refer to the following diagram:



Setting this parameter too low may cause the effective part of the graphic to appear thin, faint, fuzzy, or non-existent. Too high of a parameter will cause these objects to appear thicker, bolder, or more powered than the high density areas of the graphic.

***DENSITY:*** Adjusts the difference between the entire unengraved and engraved areas. If the parameter is too high, then the entire engraved image may appear thick, bold or over powered. Too low of a setting may cause the image to appear thin and pixels or parts of characters may disappear altogether. The opposite effect would occur on inverted images such as white text on a black background.