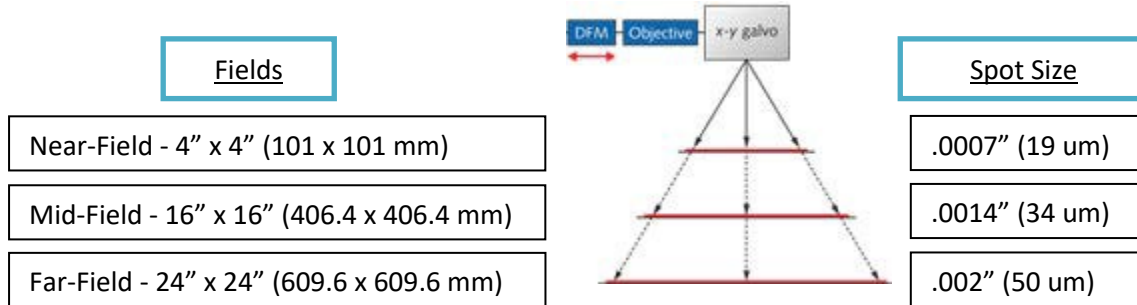


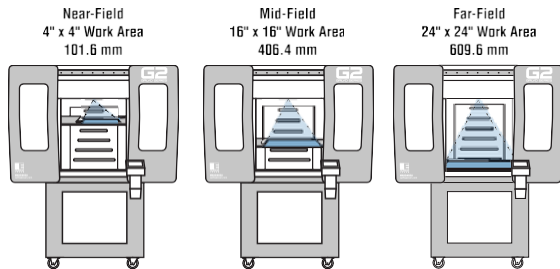
Epilog Laser Galvo Model G2

Operating Instructions

The Epilog G2 galvo system is a three-axis galvanometer comprised of two galvanometers (motors), a translating lens, and a fixed focus length lens. This system is designed to mark at three separate focal lengths with each focal length producing a different spot size as well as three different field sizes. The field and spot sizes are shown below:



The illustration below shows the approximate position of the different fields:



The marking process is very straightforward and consists of the following steps:

- 1) Power on the G2
- 2) Select the field you are going to use
- 3) Raise or lower the engraving table to match the field you are using
- 4) Adjust the Focus to the thickness of your material
- 5) Set up your artwork using Corel, Illustrator, etc.
- 6) Print

The instructions below provide the specific steps of how to use the Epilog G2.

Set Up:

Plug the power cord into the G2. The power receptacle is located on the right side towards the back of the G2.

There are two power switches on the machine.

- 1) Main Power – at the back of the machine.
- 2) On/Off Switch – at the control panel

There is a main incoming power switch that is located at the back of the G2 chassis. This switch must be pointed in the vertical “UP” position (red band). This power switch can remain in the ON position and is not intended to be switched On/Off every day.



The primary On/Off switch is located on the side of the control panel. This switch is used on a daily basis for turning the G2 On/Off.



Connect the USB cable or Ethernet cable from your computer to the G2. The USB and Ethernet connections are on the left side of the G2.



There are two 4" (100 mm) exhaust ports at the back of the machine. Connect a 350 CFM exhaust fan to the ports and vent to the outside.



Other Functions

Light Switch – The light switch controls the internal lighting of the cabinet.

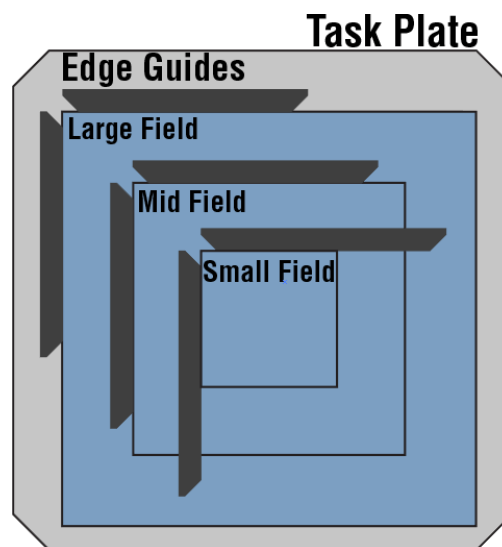


Set edge guides:

Move the edge guides to match the field. The G2 is oriented so that the 0,0 "Home" position is in the upper left corner of each of the three different fields.

The three fields are offset from each other creating a 0,0 "Home" position that is in a different position for each field size.

Move the edge guides to the corresponding field location. The edge guides fit into holes in the table and can be lifted straight out when relocating.



Epilog G2 Keypad

The instructions below describe the functions of the keys on the G2 keypad. Please be aware that some keys have multiple functions.



Jobs Menu

Lists Jobs that have been sent to the laser in the order they were sent. Press this key and use the joystick to scroll through the available jobs at the laser.



Data Transfer

Illuminates only when a job is being transmitted to the laser system.



Focus

Pressing this key allows you to manually raise or lower the table to the desired focus. After pressing the FOCUS key you will use the joystick to raise and lower the table to your desired height. The display will show you the table position in thousandths of an inch or millimeters.

- Pressing and holding the FOCUS key for 3 seconds will activate two visual indicators to help you focus your product. The visual indicators consist of a red dot and a red line. Raise or lower the table with the joystick so the small red-dot is centered in the vertical red line that is projected onto the table.



Start / Pause

Pressing this key starts the selected job, pauses a job that is already running, or resumes a job that has been paused. Use the joystick to scroll through the jobs on the control panel display to choose the job you want to start. Once your job has been selected, press the START/PAUSE key to start the job.

After your job has started you can press this key to pause the movement of the laser beam as well as the firing of the laser beam. Please be aware there is a slight delay between when the Pause button has been pressed and when the job will stop. Once the job is paused you can open the door to examine the mark on your material. By closing the door and pressing this key again the marking will commence where it left off. If the item being marked is not moved the marking registration will not be affected.






NOTE: Opening the door on the laser system during operation will immediately stop the laser from firing. Always Pause your job before opening the doors.



Reset

Pressing the RESET key will stop the job and move the laser back to its Home Position. Press the reset key after you have paused a job that you are currently running. The galvo will reposition itself to the start position of the job.

RESET does not erase the job from the laser system's memory; rather it will stop the engraving job in process and the galvo will reposition itself to the home position.

 <p>Red Dot Pointer</p>	<p>The RED DOT POINTER key is a toggle switch that turns the laser system's red dot pointer on and off. When the red dot pointer is on, the indicator light on this key will be illuminated and the red dot will appear in the upper left corner of the field you are using.</p>
 <p>Trace</p>	<p>The TRACE key is an On/Off toggle switch. When activated it produces a moving, visible red beam that creates a rectangle to describe the area where your artwork will be marked. The rectangle is calculated by measuring the extreme points of the graphic and constructing a rectangle around this graphic. This is a very useful feature for artwork positioning.</p>
 <p>Near-Field Work Area</p>	<p>Pressing this key will select the Near-field work area and position the translating lens to work with the table raised to the topmost table position.</p> <p>Pressing and holding this key for five seconds will move the table to the topmost table position.</p>
 <p>Mid-Field Work Area</p>	<p>Pressing this key will select the Near-field work area and position the translating lens to work with the table at the middle table position.</p> <p>Pressing and holding this key for five seconds will move the table to the middle table position.</p>
 <p>Far-Field Work Area</p>	<p>Pressing this key will select the Near-field work area and position the translating lens to work with the table at its lowest position.</p> <p>Pressing and holding this key for five seconds will move the table to the lowest table position.</p>



Settings

Pressing the SETTINGS key will give you access to different menu items. You can use the joystick to scroll through the different options available in these menus. Pressing this key will initially bring up the IP address of the machine.

Setting the IP address:

Center click to gain access, **tilt the Joystick** up or down to increment or decrement. **Tilt left or right** to move to the different sets of three numbers. Press the START/PAUSE key to make your change permanent.

Setting Units:

Use the Joystick to Tilt Left and gain access to the Unlock menu.

Printing to the G2 Using the Epilog Software Suite

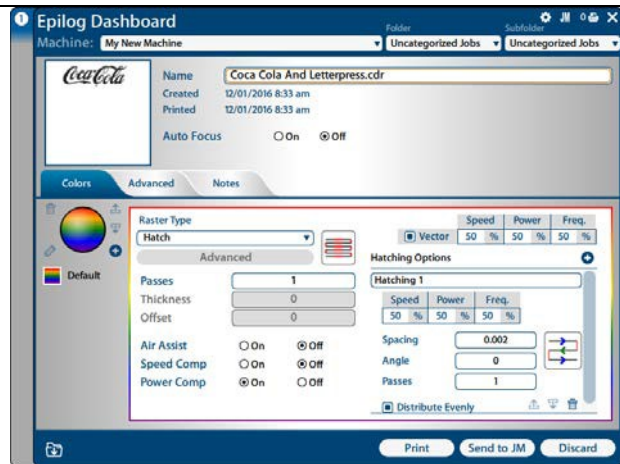
Important Information:

- The G2 software suite is the print interface between your computer and your G2 galvo system. It consists of two separate components that allow you to print to the G2 galvo system:

Dashboard – The Dashboard is the primary “print driver” for your G2 galvo system. When printing to the G2 galvo all laser functions will initially be set in the Dashboard.

Once your initial settings have been established you can choose to print directly to the G2 or you can send the job with all laser settings to the JM (Job Manager).

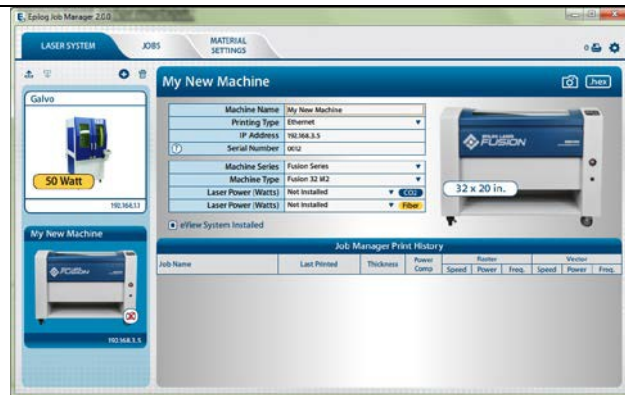
The Dashboard is described in detail later in this document.



Job Manager (JM) – The Job Manager acts as a file management system that saves all print jobs sent to the JM. The JM can store, recall and reprint any previously printed job.

All laser settings can be reconfigured from the JM.

The JM is described in detail later in this document.

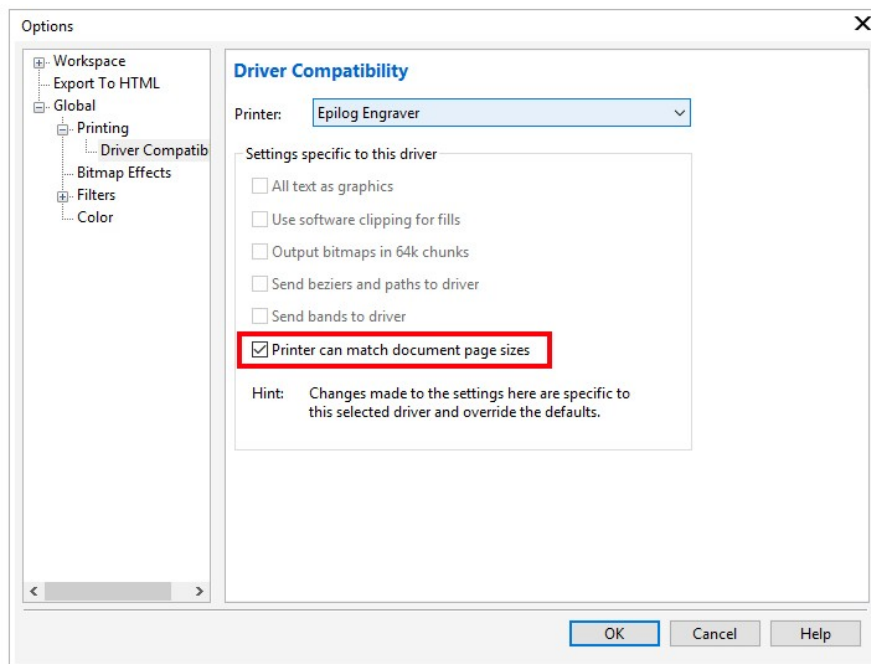


Installing the Software Suite:

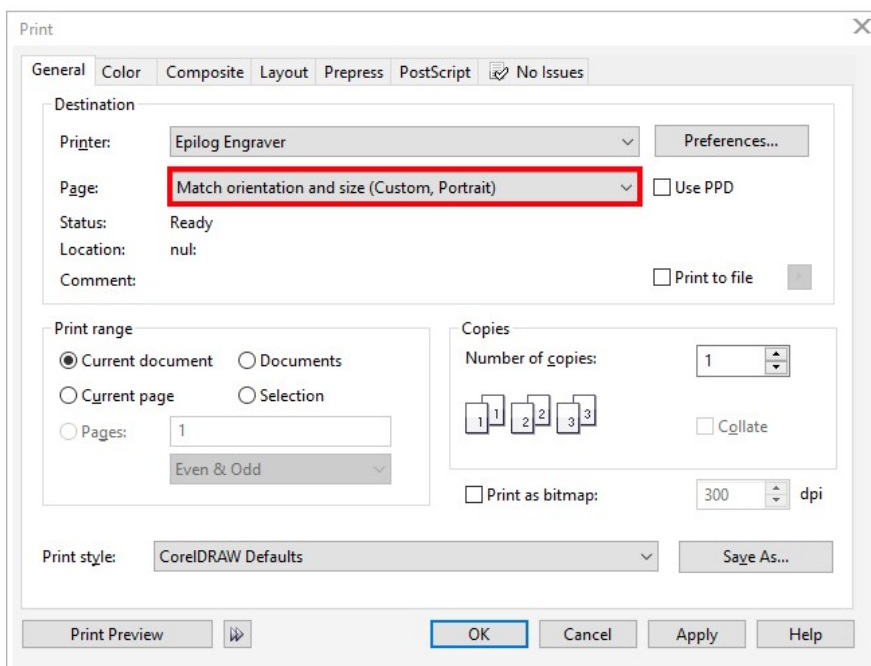
Install the software suite and follow the prompts as you move through the process. The installation process will install both the Dashboard and the Job Manager.

G2 CorelDRAW Printer Set-Up

In CorelDraw X8 – Tools / Options / Global / Printing / Driver Compatibility select the “Printer can match document page sizes” option.

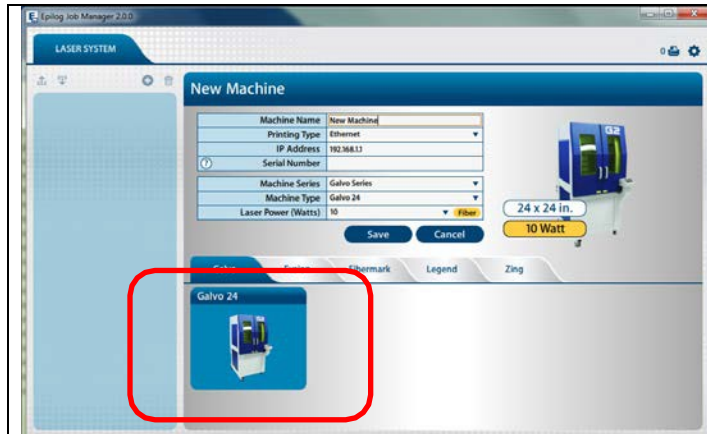


In the Print Dialog, select “Match orientation and size (Custom, Portrait).”



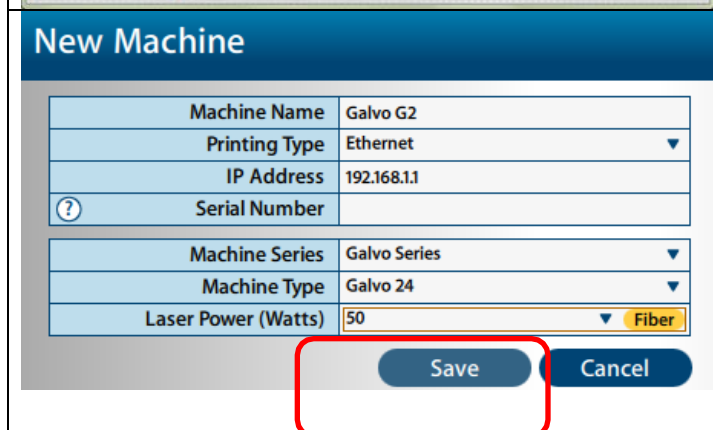
Activating your G2 in the Job Manager:

You must activate your G2 in the Job Manager before you can print to the system.



The first time you open the Job Manager you will be presented with this page.

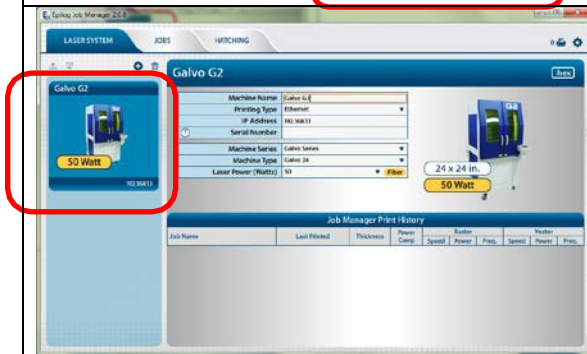
You will need to activate your G2 within the JM before you can print using the Dashboard.



To activate your G2 laser system within the job manager give your machine a name, set the Printing Type, IP Address, laser wattage, etc. (Serial Number is not required).

Click Save.

Your machine configuration has been saved.



Your G2 galvo has been activated in the Job Manager and appears in the left column of the JM.

You can now print jobs to your G2 from the Dashboard and the Job Manager is now ready to accept jobs from the Dashboard.

Using the Dashboard:

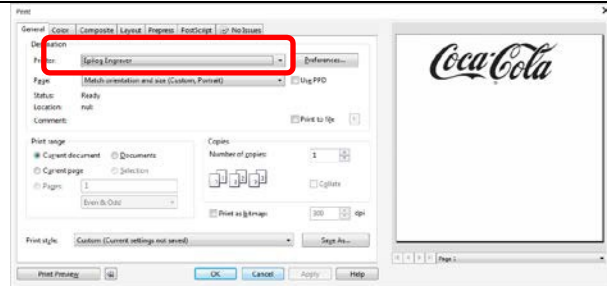
Artwork Setup:

Set up your print job in Corel, Illustrator, etc. Use a page size that matches the Field size you are going to use.



When your artwork is set up, use the Print function to print the job.

Select the Epilog Engraver and then click OK.

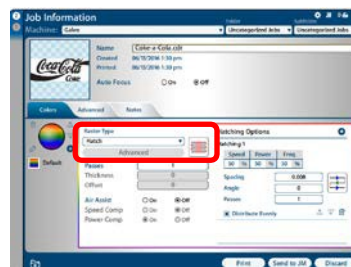


The Dashboard will automatically pop up after printing from your application.

The Dashboard provides the platform for controlling all aspects of the G2 laser system: Speed, Power, Frequency, Hatch type, etc.



Set Raster Type to Hatch.



There are two types of Hatch fill:

Click on the “Toggle Break Style” icon to toggle between the two different break fills.

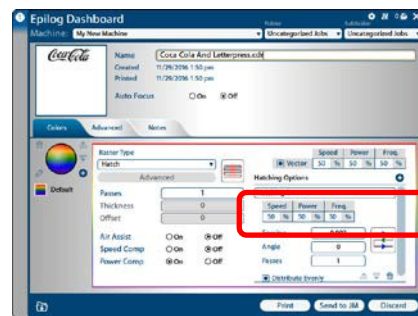


- 1) **Open:** This fill will engrave individual objects one at a time.



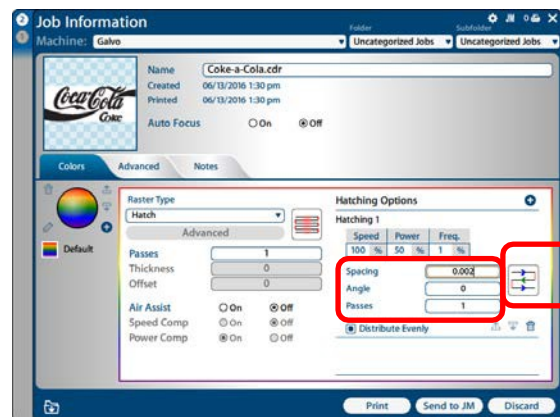
- 2) **Closed:** This fill will engrave the entire graphic as one item.

Set the Speed, Power and Frequency.



Set Spacing, Angle and Passes.

- 1) **Spacing** - establishes the space between engraving lines. It can be set in increments of .001” from .001” to 1.000”. Many applications use 0.002” as the ideal.
- 2) **Angle** - establishes the angle of engraving relative to the X-axis on the table. The most common angles are 0, 45, 90, and 315.
- 3) **Passes** - establishes the number of passes per hatch fill.



Click on the “Toggle Hatching Style” icon to set the hatch style. There are four hatch styles.



S-Sweep: This is a continuous sweep that fires the laser during the transition from one scan line to the next. This option produces the fastest processing speeds.



Open Sweep: This is a back-and-forth sweep. The laser does not fire during the transition from one scan line to the next.



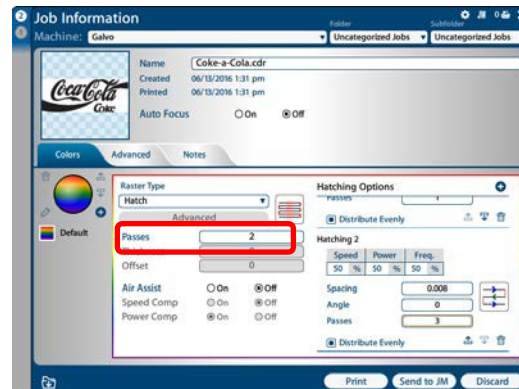
1-D: This sweep fires the laser in only one direction. This option produces the slowest processing speeds.



Outline: This sweep produces a border around the outside edge of each engraved object.

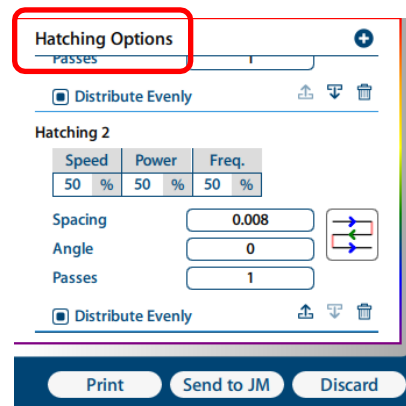
Passes – This global setting establishes the overall number of passes for the entire job.

A job that has 3 passes assigned in the Hatching section and 2 passes in this section will perform a total of 6 different passes.



Hatching Options

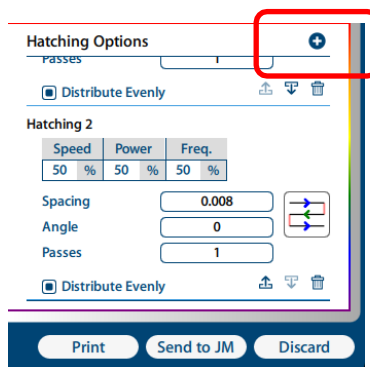
Multiple Hatch parameters can be used in a single job setup where each hatch option can have a completely different set of parameters. This feature is used when more than one fill is desired to obtain a certain look to the engraving. For instance, many users will engrave the first hatch fill at a 45-degree angle and then repeat the job using a 315-degree angle. The result is a fill pattern that has a crossed hatch look.



To create more than one hatch fill, click the + button. This will bring up Hatching 2 dialog box.

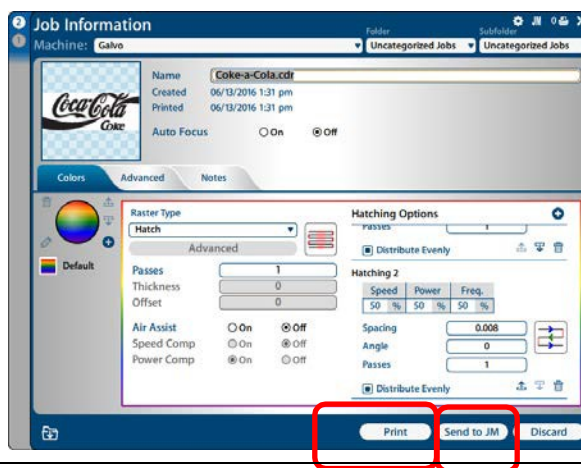
Set the laser parameters for the second hatch fill.

There is no limit to the number of Hatch Options you can create.



Once all of the laser parameters and Hatch Options have been set you will have two options for printing:

- 1) Send the job to the laser by clicking on Print.
- 2) Click on "Send to JM" to send the job to the Job Manager. The Job Manager allows you to save the for future use.



Once the job has been sent to the laser you can preview an outline trace of where the job will engrave. With the keypad in Job mode, activate the red dot pointer and then press the TRACE key. The red dot pointer will trace an outline of the entire engraved area.

Press Trace again to stop the preview.



Supplier's Declaration of Conformity
47 CFR Paragraph 2.1077 Compliance Information

Laser Materials Processing System Model 15000

Epilog Laser Corporation
16371 Table Mountain Parkway Golden,
CO 80403

Telephone: (303) 277-1188

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received,
including interference that may cause undesired

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.