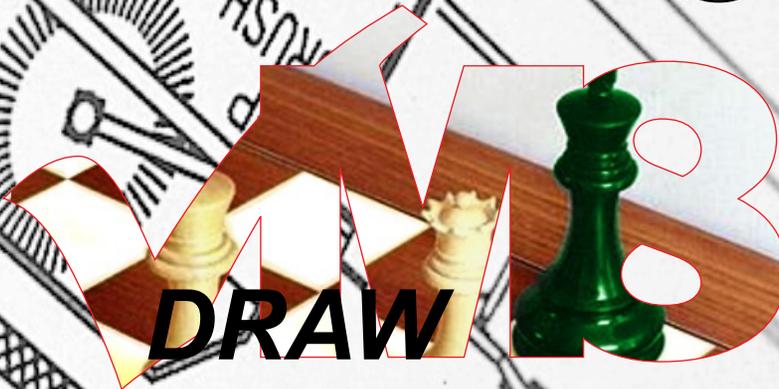




CheckMate
Lasers
& Routers

Training



Instructed By
Joe Braga



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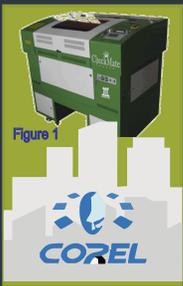
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Professional Development

The Checkmate Laser can run from any Software through the XM8Draw Interface. But we support it from Corel X3 or better. This Package is the Backbone of the Industry and is the most used Graphics Package in most Shops throughout the World.

● Welcome to Checkmate

1. **A)** Welcome to the Checkmate Lasers & Routers, the purpose of this Tutorial Manual and its Instructional PDF Fliers is to not only get the unit up and running, but you making money with it.
B) There will be a series One page subjects with Videos and add-on sheets of data or samples Jobs to train you.
C) This in concert with the Corel Graphics course and the on-site or PC to PC training should have very proficient in no time. Installation is the most important job we do at Checkmate, now let us move forward.

● Your Main Staff

2. **A)** The Main part of our team is Louie Alvarez and Joe Bràga together they are 40+ years of experience within our Industry.
B) First, Louie he is the owner based in Las Vegas and has run Lasers and engravers as a operator, Technician and Applications Expert. See his 'Bio' on the Website and caught his Webinar on-line.
C) Joe, is the same, owning engraving and sign operations and running technical support for many of the manufacturers out there. Caught his 'Bio' at www.engraverschoice.com. These two and there balance of the team and Demo throughout the North America are to help. Call them anything they eager to instruct you with whatever questions you may have from Software to Hardware to Pricing and Shop marketing of you individual product lines.

Checkmate Laser XM8Draw Training

Figure 3



Changes-out in 15 minutes
CheckMate
l a s e r s



1XM8 Laser Promo



topics

- Welcome to Checkmate **Sec. 1**
- Your Main Staff **Sec. 2**
- Laser Line **Sec. 3**
- Router Line **Sec. 4**



Figure 2

Installation Video I

Goal: Intro to Checkmate Lasers & Routers

● Laser Line

- 3- **A)** The Laser Line ranges from the Grand master 5x8 foot Class-4 Laser to the Pawn 40 which is desktop.
B) The King and Queen model are our large Class-one Lasers or inclosed units. Coming in Wattage from 60 -120 watts.
C) The Rook to the Knight are our mid-range laser and are in the 50 -60 watt level. All are 2 year warranties. When you call just inform us of what you have or just text us your questions. Most questions will be software related to either Corel or XM8Draw interface. Remember if will work on one job but not the other it is the job not the Laser or PC, so narrow it down to its smallest section.

Figure 3

● Router Line

- 4- **A)** The Router line for Checkmate is limited to the larger tables 4x4 and larger.
B) Engraver's Choice does offer small tables engravers both in the recognition line and industrial through **U-Marc** Engravers.
C) For Checkmate the routers, it is the same Interface and can also run from CorelDRAW. Remember, you can use whatever software you wish within the Industry to run your equipment. But we support CorelDRAW and Cadlink at this time, but you can ask if needed.





Figure 1



Checklists 1 & 2 & Training

Use the Checklists PDF for Pre-Install and Install of the hooks to Walk you through the Main process of the Installation of the Laser. We will check all this, but we can have you start the installation. We can verify all is good and have more time for training when we are there.

Checkmate Laser XM8Draw Training

Figure 3

● Verify Shipment

- A)** You should have got a Pre-Installation Sheet PDF to go through, the main Items is the **220 VAC** electrical Output and the Portal for the Laser Exhaust.

B) When you get the Crate, uncrate the laser and roll into place. Then go through the Shipping checklist to verify all components are there .

C) Additionally, recheck the prep-installation checklist and that all items were received intact and not ship damaged. Especially, the Laser tube and lastly place the Laser Tube in a safe place before it is mounted the Laser itself. If the Checklist is complete move forward to the next section

● Uncrate & Position

- A)** When un-crating the Laser remember to be aware that are many items packed inside the crate.

B) You must remove the tie straps or tie downs and get it off the pallet after insuring that you are clear, have all items removed for the shipping Crate that may be in the way when getting off the Pallet.

C) Remember again, to follow your Checklist and PDF's that are associated with this section of the installation. Once rolled into place, evaluate that all the tie-straps are removed, so not to interfere with motion of going to its home position for the first time. Now look to see that you are prepare to start to do the hook up of the cabling and hoses it will take to finalize installation and start testing the laser.

What To Expect Upon Receipt of an XM8 Laser?

All CheckMate Lasers machines (exception being DT Series) include onsite installation, setup, calibration, testing and training. LECME, inc. sends out qualified and trained installation personnel to ensure the equipment is operational and that the operator is competent in the setup, maintenance and operation of the CheckMate Laser system. This is but an overview...

Onsite setup and training included with most XM8 Lasers

Install, Setup	Calibration, Testing	Maintenance Training	Operation Training	Software Training
Ensure components and accessories are connected securely and properly, laser tube and chiller is connected properly and safely. Laser and computer communicate correctly.	Ensure optics are calibrated, laser tube outputs properly, software is correctly setup. Entire laser configuration is tested to ensure proper operation.	Proper maintenance is integral to the long operation life of XM8 Lasers, hence optics, rails, motion system, and basic cleanliness is covered to ensure optimal operation.	Buttons, switches and keys are clearly explained to ensure accessories are activated properly, laser system is operated correctly and shutdown procedure is known thoroughly.	The largest learning curve is software operation. Operators are instructed on driver operation, image manipulation, project creation, including proper material testing and documentation.

Nearly unlimited expertise onsite for you...
Your imagination is truly your only limitation!

"With a laser system from CheckMate Lasers your creativity is your only limiting factor!"



topics

- Verify Shipment Sec. 1
- Uncrate & Position Sec. 2
- Hook-up Cables Sec. 3
- RECHECK Sec. 4



Figure 2

Installation Video II

Goal: Installing Your Equipment

● Hook-up Cables

- A)** Once you have the installation Checklist in hand, look just at the 220 VAC electrical hook-ups, **without** the laser plug into power yet.

B) Plug in the Blower, Mini compressor and Water Chiller power cables into the back of the Laser.

C) Now, attach the ground strap, Water In & Out hoses and air hose for air assist. Then attach the 4" hoses for the Blower exhaust with the clamps. There are connection points to and blower and laser. Verify you have the USB cable for the PC to Laser, **but into not hook it up yet**. We will do that as part of the XM8Draw Installation Procedures, just check the laser hook-ups.

Figure 3

● RECHECK All

- A)** Recheck first the In and Out are correct for the Water chiller.

B) Verify the all shipping straps are removed and that the motion systems is not bound.

C) Check that all Electrical power cords are plugged into the back of the Laser. Check the Ground is secure on both sides, and the air compressor is attached correctly on both sides. Look at your checklists & you are ready to start to look at mounting the Laser tube. Remember **NOT PLUGGED** into AC Power, Safety First!

Basic Installation

Pre-Install List

- 32-bit or 64-bit computer system
- Windows 7 (preferable), XP, 2000 (Vista is HIGHLY discouraged!)
- 3x gallons distilled water
- 1x large adjustable wrench
- 1x medium sized set of pliers
- 1x medium sized Phillips screwdriver
- 1x medium sized flathead screwdriver
- 1x 3mm Allen wrench
- 1x Solder Iron and Solder (0.040" diam./20 gauge/2.2% flux)
- 4" ventilation connection to outdoors (this can be connected at a later date)

Connections List

1. Blower Power Cable
2. Mini Compressor Power Cable
3. Water Chiller Power Cable
4. Ground Strap
5. Chiller Hoses In/Out
6. Air Hose
7. 4 " Exhaust Hose

Figure 1



Tube Inspection

- 1. Check box for damage
- 2. Check tube for Cracks
- 3. Look at connectors
- 4. Prep Laser
- 5. Leave in Box

● Prep for Tube Install

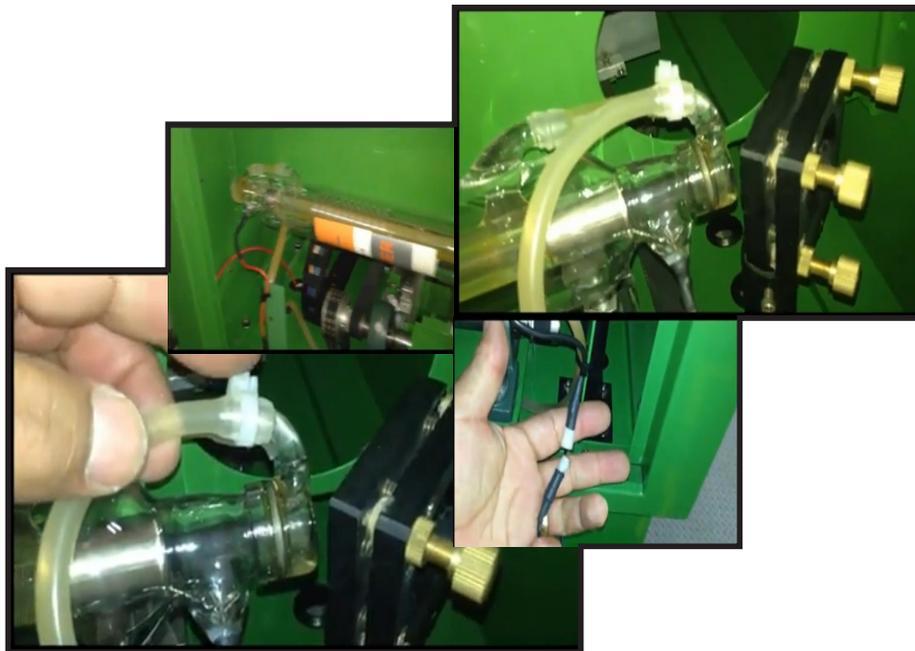
1. **A)** The Tube is shipped in a separate container, so open that box and inspect it. Leave the Tube the box and let us prep the laser for the tube.
B) Remove the Laser tube cover from the back of the laser or hinge the cover back with a cord to hold it up.
C) Now remove each of the two clamping screws from the right and left areas with the proper screwdriver. Now inspect the electrical connector and hoses from the water chiller to identify them for connection later in the process. Adjust the clamps out and you are ready.

● Mount Tube to Laser

2. **A)** Look at the Tube and see that there are two electrical connector of different types on the each end of the tube. On the Laser in the Tube area are the inverse male to female connectors.
B) Then you take the Tube the Box and place into the Laser the Tube beam points at the First mirror about 1/4 away from the mirror. The Connectors are aligned so that we can not get the tube in backwards.
C) Now connect the Electrical connectors and the hoses for the water chiller either with tie straps or quick connects. The should have tape wrapped around the tube in two places, so you can screw the clamps in around the wrap taped areas (2) of the tube. Adjust the gap of the Tube to the mirror from 1/4 to 1/8 and tighten the clamps screws in. Put the Cover into place and you are done with this section.

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw-A

03

TRAINING VIDEO



For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Prep Tube for Install [Sec. 1](#)
- Mount Tube to Laser [Sec. 2](#)
- Connect & Position [Sec. 3](#)
- Power-up [Sec. 4](#)

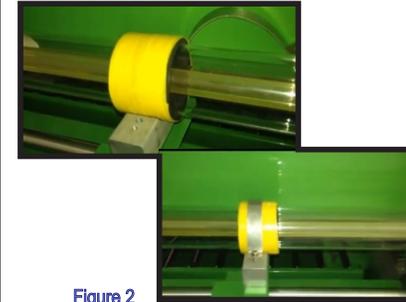


Figure 2

Installation Video III

Goal: Tube Installation

● Connect & Position

3. **A)** So in review, We connected the left electrical connector Male to Female, and the Right Connector Female to Male with the laser tube opening pointed at the mirror.
B) Then we connected the hoses for the Water Chiller and secured them with tie strap, if needed left & right.
C) Adjusted the position of the Tube to the mirror 1/4 to 1/8 and clamped the tube in with over the taped two areas of the tube with our two screws. Replaced the cover and you were ready to go. Yes it is that simple and for many of you there was a extra tube in the crate for when you need it.

● Power-up

4. **A)** There is a video online at "You Tube"; <http://www.youtube.com/watch?v=IGT4YaWZD44>.
B) This along with the PDF attached to the course should show are simple this is..
C) Now we are ready to Power up the laser to watch it home up. Once that is done we will turn the laser off for the moment and load the XM8Draw Interface, you should already have CoreIDRAW load on you PC, and we now move forward.

Basic Installation

Tube Checklist

1. Place Tube into Laser.

2. Pointed at First Mirror.

3. Two Electrical Connectors

4. Two Water Chiller Tubes.

5. Clamp down over taped areas.



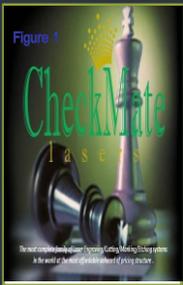


Figure 1

- XM8Draw Checklist**
1. XM8Draw CD
 2. Security Toggle for USB
 3. CorelDRAW Installed
 4. Good PC
 5. Install Videos

● Install XM8Draw

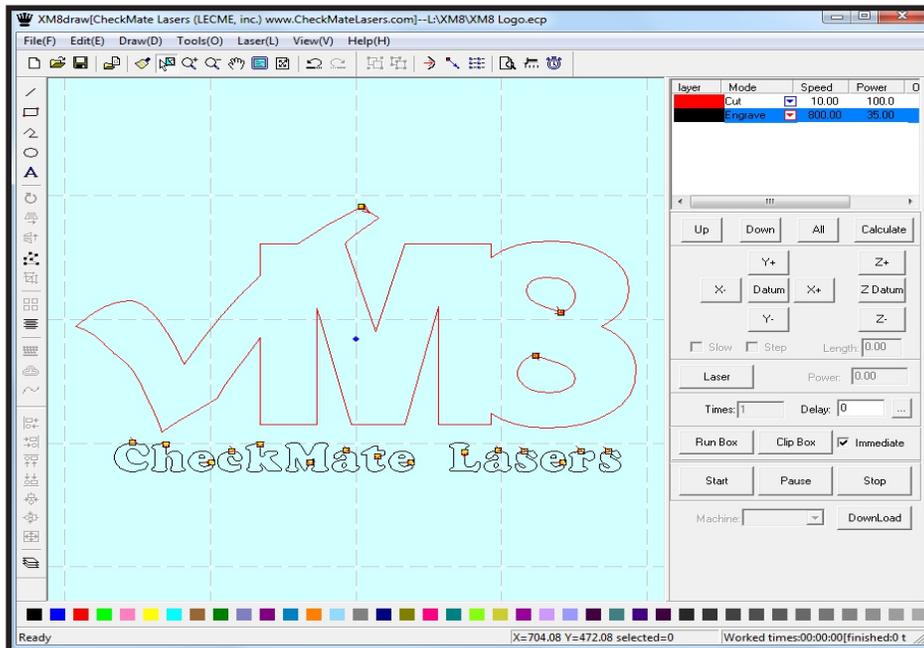
1. **A)** At the point we are ready load the Software from the CD-DVD you received with your equipment, install Driver First.
B) Have no other programs open when you load and follow the directions that the Installation Program gives you.
C) As you move through the installation Program it will ask what table you have and when you are to plug the USB cable into the Laser and PC. The timing of this is very important to completing a proper installation of XM8Draw Laser Interface to you PC. If you make a mistake you may have to UN-install the XM8Draw and re-install to the PC after you do a reboot. Once installed correctly a reboot is a must.

● Align Defaults

2. **A)** Once the Driver & Software is loaded, reboot the PC, Then ensure the USB cable is connected on PC and Laser
B) Plug in the USB Toggle to the USB port and double click on the XM8Draw Icon on the Desktop to start the Interface Program. Without the USB Security Toggle you will not be able to start XM8Draw Interface.
C) Now verify the Defaults for you size table have been loaded and check the Power and speed setting for a normal Laser-able material for you shop is loaded. The laser default to the setting of Power and Speed etc that you will use the most. One less thing to do when setting up a laser job in the interface.

Checkmate Laser XM8Draw Training

Figure 3



7 XM8StepbyStep-LaserOperation

XM8Draw-A

04

TRAINING VIDEO



For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Install XM8Draw Sec. 1
- Align Defaults Sec. 2
- Create a Simple Job Sec. 3
- Prep for First Run Sec. 4

Basic Installation

Steps to Install

1. Install XM8Draw
2. ReBoot PC
3. Plug in Toggle
4. Open XM8Draw
5. Set Defaults
6. Plug USB to Laser



Figure 4

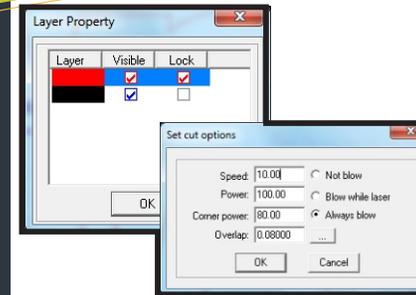


Figure 2

Installation Video IV

Goal: Load XM8Draw Interface

● Create a Simple Job

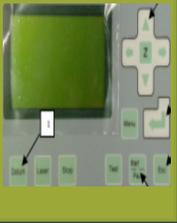
3. **A)** Enter the XM8Draw Interface and click on the **Text** Icon on the Toolkit to the Left.
B) Pull & Drag a Box out and Click through the **Text Dialog** to enter the information.
C) Now Draw a box around the text with the **Box** Tool from the Toolkit . Assign **Red** to the box and **Black** to the text from your Pallet on the bottom of the screen within XM8Draw. On the Standard Bar at the top of the screen, fourth from the right is the "**Set Knife Origin**". Click it and set Top/Left for your origin for our first Job.

● Prep for First Run

4. **A)** Now to the Right of our screen is the Machine Controls.
B) At the top of the Machine Controls you should see the layers and you should have two, **Red** and **Black**.
C) To the Right of that you will see mode and a little down Triangle on the **Black** click and assign "Engrave" to and "Cut" to **Red**. Now assign the power and speed to each by what material you have. When ready, just click the "**Start**" tab and the job will go to the Laser Engraver.

Figure 3

Figure 1



Focus

1. On the plate adjust the Z axis or Table
2. Using the Control Panel adjust up or down
3. Until the two RED Diode point Merge
4. You are Focused

● Light up Laser

1. **A)** Turn on Laser, then Turn ON the power switch to water chiller, If your chiller is 220v (refer to label) when the Master Power key is activated. In order for this to be automatic ensure chiller is on, without the tube is harmed.
B) On The Front Panel; Turn on Master Power key, This powers the entire laser machine. Turn on Driving Power (O depressed is Off) This activates power to the motors., Turn on Laser Power (O depressed is Off) This activates power to the laser tube.
C) Turn on the "Unprotect" key, red, Press the "Laser Switch" button (depressed = ON). Checkmate laser system is now ready to operate. (Remember to Focus)

● Test Controls

2. **A)** To shutdown the System, complete Section '1' in reverse.
B) Now go to the PC load your test job, check it and hit "Download," under Machine Controls.
C) Datum laser, Allow lens assembly to return home (U/L) Press "Esc" to Enter "Manual XY move mode" Using 4 directional arrow keys, move lens to location. Factor in "Set origin position" Press the control panel key (3) times. *1st "Enter" accepts new location, *2nd "Enter" accesses "Set Logic Org" menu *3rd "Enter" programs new "Logic Origin" Start/Pause to begin. (Remember to Focus)

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw-A

05

TRAINING VIDEO



For the Industrial, Signage, Recognition & Marking Industries

X-GRAPHICS

XM8Draw Training

topics

- Light up Laser Sec. 1
- Test Controls Sec. 2
- Run Test Job Sec. 3
- Adjust as Needed Sec. 4



Figure 2

Installation Video V

Goal: Testing to Laser

● Run the Test Job

3. **A)** As you run the job on the Laser notice as the lens sweeps across the plate.
B) Is it positioned correctly and does the unit Draw the Box around the text.
C) The Sweeping motion is Raster or what XM8Draw Calls "Engrave", and the Box is the Vector or what XM8Draw calls 'Cut'. Vectoring can control power to draw or increase power to cut. Raster or Engrave is like a printer sweeping across the plate control power to crate image. (Remember to Focus)

● Adjust as Needed

4. **A)** The First Check is to adjust for Positioning and that is just your starting position.
B) Next is Raster vs. Vector or Engrave vs cut.
C) Then do Power and Speed. Remember, the slower you do go at the same speed the deeper you cut or engrave. So you will have different Power and Speeds for different materials. Save these into a directory called 'Materials' and you can recall jobs for better looks onto material and faster production output.

Figure 3

Basic Installation

Laser

1. Datum laser. Allow lens assembly to return home (upper left)
2. Pres "Esc" to Enter "Manual XY move mode"
3. Using 4 directional arrow keys, move lens assembly to desired location
4. Factor in "Set origin position" selection when moving to new
5. Press the control panel key three (3) times
 - a. 1st "Enter" accepts new location
 - b. 2nd "Enter" accesses "Set Logic Org" menu
 - c. 3rd "Enter" programs new "Logic Origin"
6. Press "Start/Pause" to begin job from new "Logic Origin"



6 XM8StepbyStep-ControlPanel



www.coreldrawtraining.com



4 XM8StepbyStep-Startup



5 XM8StepbyStep-SetLogicOrigin



Figure 3

1. Find Autorun & 'Send to Desktop'
2. Right mouse click Desktop icon & 'Rename'
3. Right Mouse Icon & 'Change Icon'
4. Test it

● Copy Corel Course

1. **A) Step One**, You have a 8 GIG jump or flash drive that came from Engraver's Choice put that into the USB Drive.
B) Once the PC sees the Jump Drive, put your Mouse cursor on the **Start** key of Windows in the bottom left hand corner of you PC screen and **'Right Mouse'** and left mouse click the "Explorer" or *'Open Windows Explorer'* Command
C) On the 'C:\' Create a Folder ' Corel Master Course' and copy the files from the Jump Drive to the folder. Just select the Jump Drive and **'Select All'** and Right mouse click and **'Copy'** then select the Folder on the C:\ drive and **Paste** the Files into it, once done coping we are ready to move forward.

● Install SHORTCUT & Label

2. **A)** Find the **'Corel Master Course'** folder and look for .EXE or 'Autorun' if you do not see it. Find 'Options' and ' See hidden files.
B) Once you find the 'Autorun' right mouse click and left mouse click on the **'Send to'** send to **'Desktop'** (Create Shortcut)
C) Now click the 'Minus' icon at the top left of the Explorer screen and get out to your desktop. You will see the 'Autorun Icon' right mouse click and 'Rename' to 'Corel Master Course'. Then right mouse click and change the icon. Just direct yourself to the 'Corel' Program folder under 'Program files' folder and to the "Program" and click on 'PrintWiz' and click 'OK' the Icon on the desktop will change.

Checkmate Laser XM8Draw Training

Figure 3

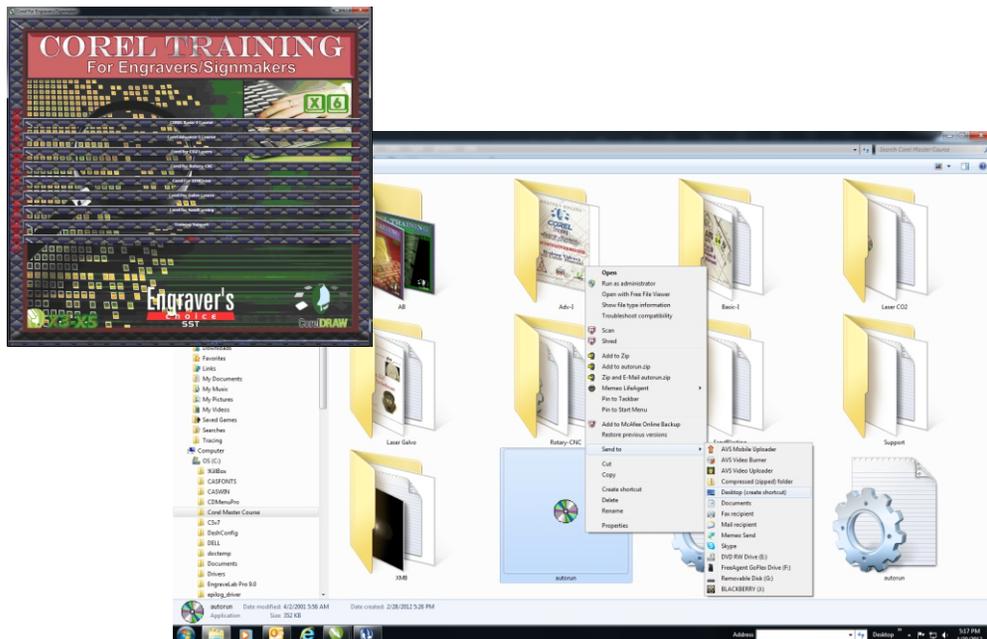


Figure 3

XM8Draw-A

06

TRAINING VIDEO



For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

Basic Installation

Quick Steps

1. Copy course to Folder
2. Send Icon to Desktop
3. Rename Icon
4. Change Icon
5. Test Icon
6. Test Course Videos
7. Test PDF Manuals



Figure 2

Installation Video VI

Goal: Install Corel Course & Run

- Test Videos & PDF
 - Using the Course
3. **A)** Once clicked into the Corel Course. Go to Basic-I and click Beginning Video I & II.
B) Click any of the Video shown if they do not start you Windows Media player will load what files from the internet it needs to start.
C) Go back to the Basic-I section and double click on the Manual and it should load. If not the Adobe PDF reader can be load from the DVD or the it will load for the Internet. I would print out the Color Manual and put it in a binder. This will allow you to make note in the opposite blank page of the section you are in.
 4. **A)** Each page of the course covers one main subject of CorelDRAW.
B) There are 4 sections per page and 3 sub sections per section. So the information is easy to ingest.
C) There is a video link on the page and a link to the Training job that goes with that page. Watch the Basic-I twice; Then watch each video in order, they do build on one another. The section on your product line I would watch a couple of times. Phone-time is free for a year so call if you need me.

Figure 1

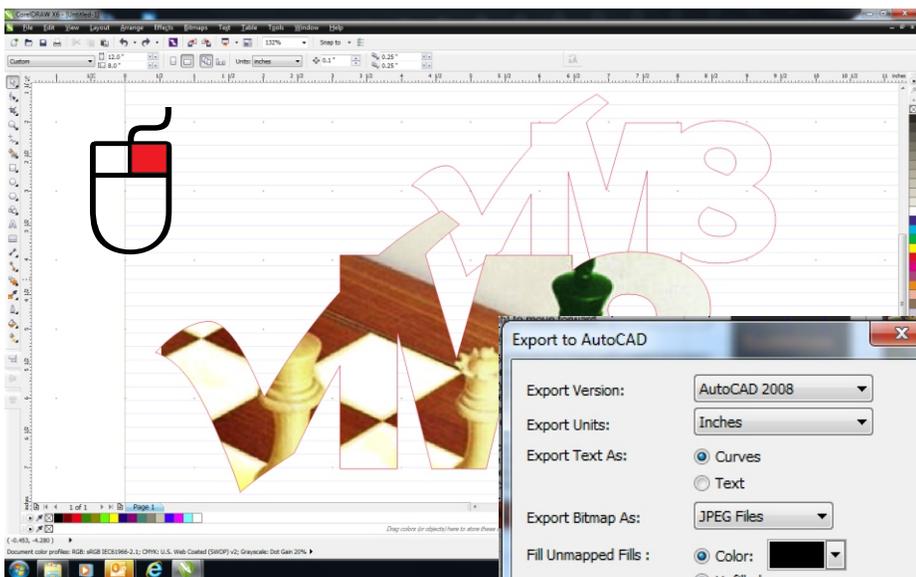


Corel to XM8Draw

1. Finish Graphic export as DXF/BMP
2. Import into XM8Draw
3. Color Vector & Rasters
4. Assign Power & Speed
5. Run it

Checkmate Laser XM8Draw Training

Figure 3



● Corel File to Run

1. **A) COREL IS A GRAPHIC PACKAGE:** XM8Draw is interface for deliver the graphic to the laser and marry the Machining to it.
- B)** Export image from Corel to XM8Draw as DXF files, you then assign the engrave/cut from there.

C) Picture and raster only as Bitmaps. Then Import the images into the XM8Draw. The better the layout in Corel the better the layout in XM8Draw. Name the files in Corel the same Name as the files in XM8Draw for search results. The Corel Graphics Package is the strongest and most used in the Industry. But you may use other packages like Adobe if you wish, But our training is with Corel only.

● XM8Draw Interface

2. **A)** Once the Graphic is imported, 'Set Laser Origin' and positioning of the graphic once it goes to the Laser. Position on the screen in XM8Draw is not important.
- B)** Now in the Machine Control Docker to the Right of Screen, assign **Mode**, *Engrave vs Cut* for example, and *Power and Speed*.
- C)** You can do many graphics operations from within XM8Draw, and we will be able to train you on many them in future sections. But the positioning Origin and the Machine Controls are the main parameters that must be assigned to the graphic so it will laser properly. This is, as we have said, allows you to join the graphics with the Power/Speed and Machine Operation as one.

Figure 1-2

XM8DrawB

07

TRAINING VIDEO



XM8Draw Functions

Control Panel

1. Datum laser. Allow lens assembly to return home (upper left)
2. Pres "Esc" to Enter "Manual XY move mode"
3. Using 4 directional arrow keys, move lens assembly to desired location
4. Factor in "Set origin position" selection when moving to new
5. Press the control panel key three (3) times
 - a. 1st "Enter" accepts new location
 - b. 2nd "Enter" accesses "Set Logic Org" menu
 - c. 3rd "Enter" programs new "Logic Origin"
6. Press "Start/Pause" to begin job from new "Logic Origin"

Figure 4

For the
Industrial,
Signage, Recognition
& Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Corel File to Run [Sec. 1](#)
- XM8Draw Interface [Sec. 2](#)
- Laser Controls [Sec. 3](#)
- Run it [Sec. 4](#)

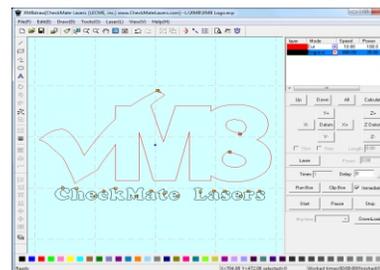


Figure 2

Corel to XM8Draw

Goal: Corel to XM8Draw

● Laser Controls

3. **A)** Once you have homed the laser, position the **Red** Positioning Diode to the Origin Point usually top/left corner of your piece.
- B)** Now hit the 'Enter' key 3-times to set and program the position to the Datum.
- C)** Now Focus the to the material by rising the table to the material and watch the two **RED** Focus Diodes merge into one. Showing the table is in focus for the that lense. 2.5 focal length lense will have the lense 2.5 inches from the material. If the Laser is not in Focus it will not engrave or cut right. As you not in the power area for that lense. This is a common error for new clients,

Figure 3

● Run It

4. **A)** On the Control or Pendant of the is the 'Start' key. Hit it to run a job.
- B)** the 'Z' key control the table up/down position for focus.
- C)** You have your toggle keys for moving to your material Origin point and setting it. You can scroll through the files to pick up other jobs. There is a test switch and you can control and adjust laser Power and speed form the Pendant, as well as tube Diagnostics and operational features.





● Line & Rectangle Tools

- A)** The **Tool-Kit** in XM8Draw is on the Icons on the Left hand side of the XM8Draw Screen.

B) At the Top of the **Tool-Kit** is the **'Line Tool'** used to draw straight and angled lines into the graphic.

C) Click on the **'Line Tool'** and position the mouse to where you wish and click and release. Now pull the mouse to the second point and click and release again. You click and release again but time hold **Ctrl** key down you get a straight line. The **'Rectangle Tool'** is the same click draw out the rectangle and click to set. If you hold the **Ctrl** key down at the same time you will draw out a **Square** on your screen.

● Polyline & Ellipse Tools

- A)** The **'Polyline Tool'** works very much like the **Bezier Tool** in Corel, every time you click you set a new control point and the line continues. If you draw the first control point the **Polyline** will auto join the points.

B) The **'Ellipse Tool'** is the same as the Rectangle Tool in its operation, but you draw Ellipses and Circles onto the page.

C) Click on the **'Ellipse Tool'** and set the first on the page, then position the to second point and click and release again, to make a Ellipse. Hold the **Ctrl** key down in this operation pul out, you will see a marquee square, but when you click the second time a **Circle** will appear on the page. You can resize and position these objects on the screen. If you click the **'Pick Tool'** on the **Standard Bar** will get out of this mode. (Standard Bar is the Icon at the top of the screen)

Figure 1-2

Figure 1

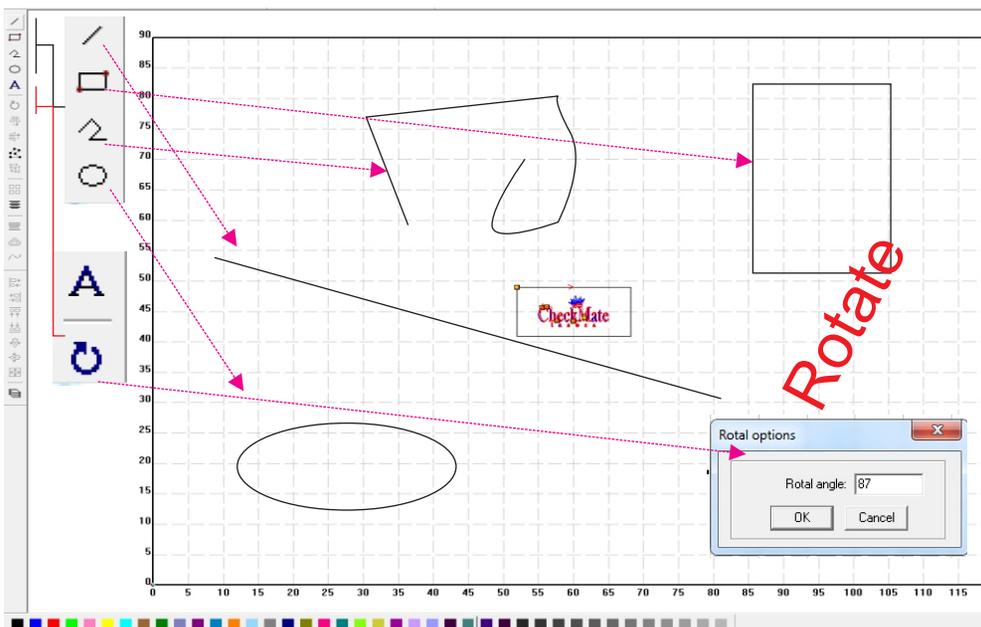


Text on Screen

1. Click the Text Tool
 2. Pull & Drag a Box
- Open on Screen
3. Type in Information
 4. Change Fonts
 5. Click 'OK'

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw Functions

Tool-Kit

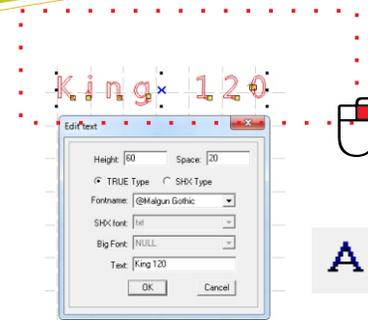


Figure 2

XM8Draw Tool Kit I

Goal: Drawing tools for XM8Draw

● Text Tool & Dialog

- A)** Click on the **'Text Tool'** on the **Tool-Kit** and **Pull & Drag** a Marquee box out, by holding the Left key down while pulling down and across the area.

B) When you do a the Text Dialog box will drop onto the screen for you.

C) You can resize the text marquee here, type in the font. You can change to SHX font from Truetype and if there is already a object selected it will ask if you wish the **'Along selected Curves'**. **SHX** font will give you a single line or center line font, Text in XM8Draw is for adding simple data to you page of layout.

Figure 3

topics

- Line & Rectangle Tools [Sec. 1](#)
- Polyline & Ellipse tools [Sec. 2](#)
- Text Tool & Dialog [Sec. 3](#)
- Rotate Tool & Dialog [Sec. 4](#)

● Rotate Tool & Dialog

- A)** Select your object or grouped text, and select the **'Rotate Tool'** on the **Tool-Kit**.

B) **Rotate Tool** Dialog will appear on the Screen.

C) Type in the angle of rotation you wish and click **"OK"**. Remember the rotation starts from where the selected image is already. So if you have already rotated once , Hit **Ctrl-Z** to **'Undo'** back to a starting position to rotate again. Text in XM8Draw is for adding simple data to you page of layout.

Figure 4



- Copies**
1. Selection line or objects
 2. Click on Copies
- Tools**
3. Enter Rows/Columns
 4. Enter Gaps
 5. Enter and Space
- Out**

● Mirror (Vertically & Horizontally)

1. **A)** With an object or text on the page select it and the **'Mirror Vertically'** icon on the **Tool-Kit** the image will reverse itself vertically.
B) With an object or text on the page select it and the **'Mirror Horizontally'** icon on the **Tool-Kit** the image will reverse itself Horizontally.
C) If you hit both Icon functions to the Image it will go reversed upside down and is what I do to the image with I Laser Glass plates or plaques. This is also used with Acrylics or reverse look logos. If you hit them again they return to normal view and you can start again to align your Layout.

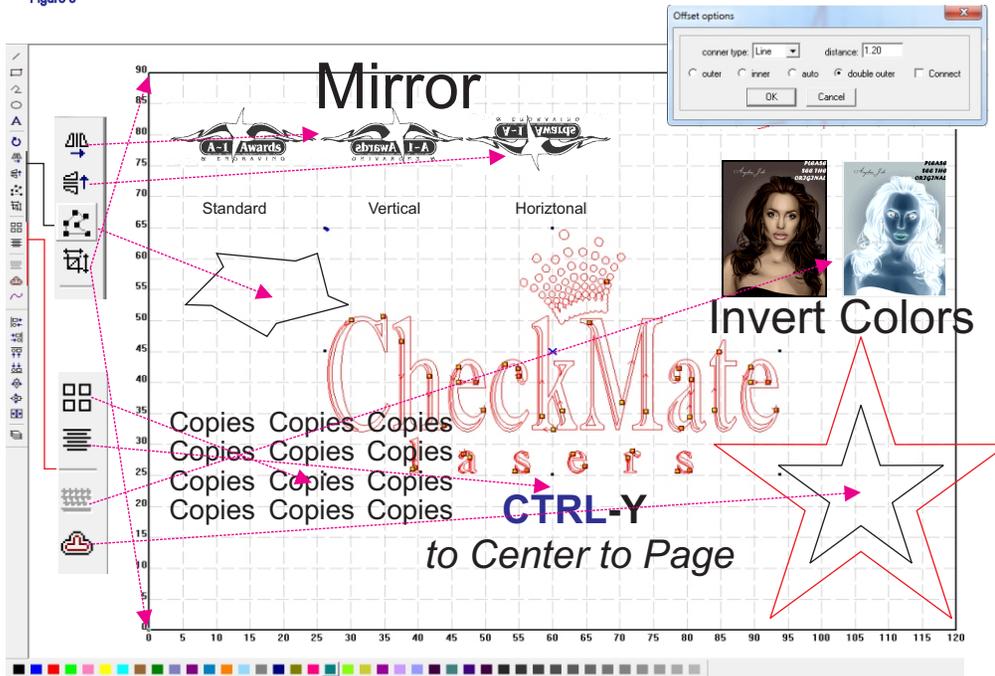
● Node Edit & Size

2. **A)** With the **'Rectangle Tool'** draw a Square out, click the **'Pick Tool'**. Now the Select the Image and click on the **'Node Edit Tool'**.
B) If you click on a the corner nodes you widen one side of the square out, on one node and then the other. When you click off it you set its new position, by Deselecting or clicking in the area of the screen that is not occupied by and image. The Node Edit Tool can used of more complex vectors, as well, But one node at a time.
C) Select and object on the page, click the **'Size Tool'** you will see the Size Dialog screen, it will show the size the object is now and then you can plug the new Length and width in the dialog and click 'OK'. If you make a mistake just click the small tab to the right to correct.

Figure 1-2

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw Functions

Tool-Kit



- Mirror(Y)
- Mirror(H)
- Edit Node
- Copies
- Invert Colors
- Size Ctrl-G
- Center to Plate
- Offset Curves

Figure 4

For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Mirror (Vert. & Horiz.) **Sec. 1**
- Node Edit & Size **Sec. 2**
- Copies & Center to Table **Sec. 3**
- Offset Curve **Sec. 4**

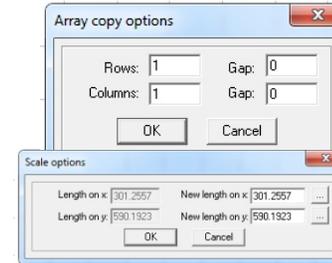


Figure 2

XM8Draw Tool Kit II

Goal: More ToolKit Functions

- Copies & Center to Table
- Invert Colors & Offset Curve

3. **A)** With text on the page select it and click the **'Copies Tool'** and you will get that dialog box.
B) Type in the Number of Rows and Columns you wish with gap amount.
C) Click 'OK' and ten select the Columns as a group and nudge them over with the **'Arrow keys'** on the Keyboard. If you hold the Ctrl key down at the same time they go in small amounts. Once the copies are make Group them together with the **'Group'** Icon on the Standard Bar.
4. **A)** Import a Picture to the page as a Grayscale.
B) Click the **'Invert Colors'** icon on the Tool-kit to invert to laser it on to a dark surface or you will get a negative. DO Not do on Light Surfaces.
C) Click the **'Offset Curve'** to offset vector lines around object or use it with no offset amounts to increase the CUT passes to get through thicker materials. The Dialog is easy use and not read even for new client.

Figure 3



Figure 1



Smooth Curve

1. Import Line Art
 2. Select the Image
 3. Click Smooth Curve
- On Tool-Kit
4. Select Level
 5. Click Ok

● Align R-L-T-B

1. **A)** These quick alignment tools are use to align two or more object to the set point on the page, in relationship to one another base which object was selected first.
B) Have two or more objects on the Page and select them all, then click the '**Align Left**' on the **Tool-Kit** and the object align to the left hand side.
C) Have two or more objects on the Page and select them all, then click the '**Align Right**' on the **Tool-Kit** and the object align to the right hand side. Remember, Selection order matters, now nudge into place.

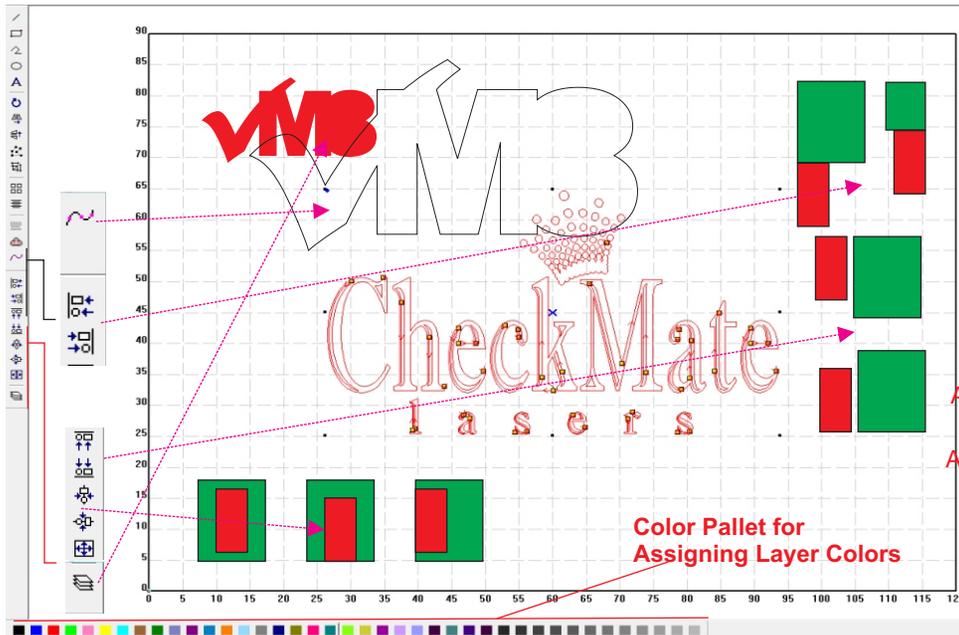
● Align Centers

2. **A)** There is three center Tools "**Align Center...Tools**", the "**Align Middle Tool**" is a high use tools. Use the Alignment tools, they are very useful.
B) Have two or more objects on the Page and select them all, then click the '**Align Top**' on the **Tool-Kit** and the object align to the Top Edges.
C) Have two or more objects on the Page and select them all, then click the '**Align Bottom**' on the **Tool-Kit** and the object align to the Bottom Edge. Remember, Selection order matters, now nudge into place.

Figure 1-2

Checkmate Laser XM8Draw Training

Figure 3



- Smooth Curve
- Align Left
- Align Right
- Align Top
- Align Bottom
- Align Centers Vertically
- Align Centers Horizontally
- Align Centers Middle
- Layers

Figure 4

XM8Draw Functions

Tool-Kit



XM8Draw-B
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 TRAINING VIDEO

For the
 Industrial,
 Signage, Recognition
 & Marking Industries
 X-GRAPHICS

XM8Draw Training

topics

- Align R-L-T-B Sec. 1
- Align Centers Sec. 2
- Smooth Curve Sec. 3
- Layers Sec. 4

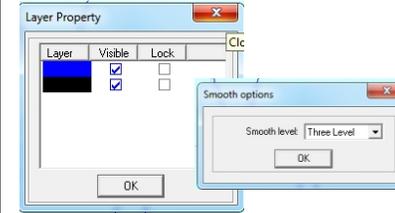


Figure 2

XM8Draw Tool Kit III

Goal: More ToolKit Functions

● Smooth Curve

3. **A)** Many times when you bring in Vectored Line Art it is not smooth to begin with or the import process affects it.
B)With the Vector Line Art on the Page, select it and click the '**Smooth Curve Tool**' on the **Tool-Kit** to activate it.
C) You will get a Smooth Curve Dialog box and you can choose three levels node smoothing. You can Undo if you do not like the result. Also remember the smaller the selection amount of nodes the cleaner the results. So, processing in sections maybe a good thing, and make the image better.

● Layers

4. **A)** Draw 3 Squares on the page and using the '**Color Pallet**' at the bottom of the screen, color them 3 different colors.
B) Click on the '**Layers Tool**' at the bottom of the **Tool-Kit**.
C) This dialog allows you to see the colors that appear to the laser and to '**Lock**' or even make '**Invisible**' for templates. (this is the main use of the colors)This is a useful tool for final production use with the '**Machine Controls**' especially to lock items into place.

Figure 3



Figure 1



Zooming

1. You Zoom in/out
2. Just Click One the Zoom Tools
3. Pull & Drag a Marquee box
4. You will either Zoom in or out
5. Its that Easy!

● New & Open

1. **A)** At the top of the Screen just under the Pull-Down Menus is the **Standard Bar** of Icons.
B) Far Left is the **'New Icon'** and is used to begin a new job or plate. Just click it and it may ask you if you saved the last job, answer and move forward.
C) The **'Open Icon'** is next to it and is used to open pre-existing jobs. In that Dialog it will let you preview the jobs, and give you option of **'Read only'** if you do not want that job changed. Make sure you are in the right directory for where you jobs are stored.

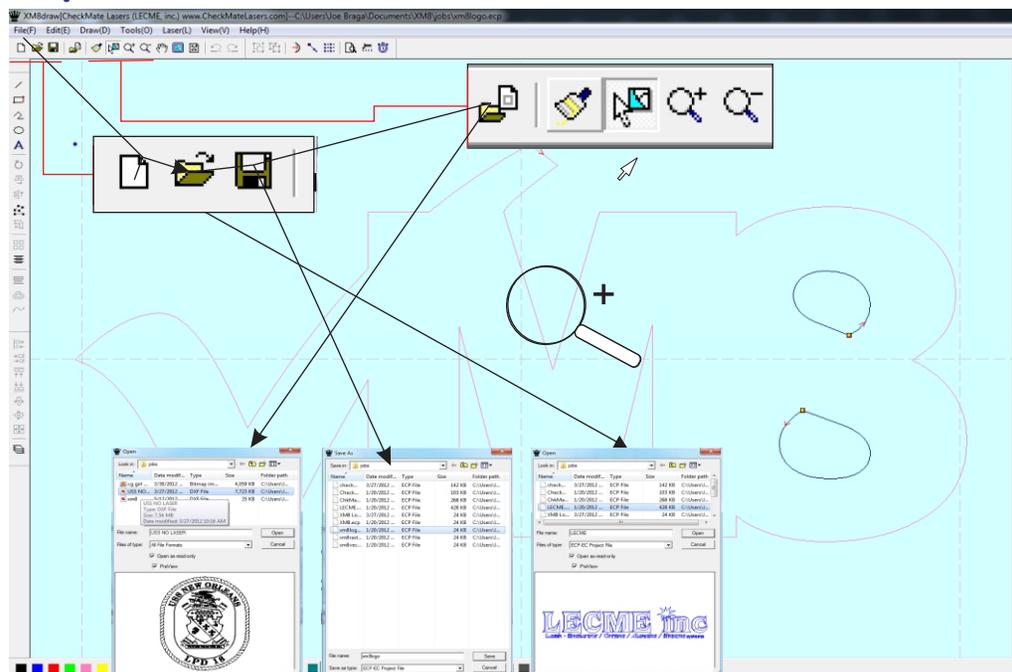
● Save & Import

2. **A)** The **'Save Icon'** is next and when this function it is important that you are saving the jobs into the correct direct so they are there when you go to open them and the you save the title of the job with **7 digits or less**.
B) The **'Import Icon'** allow you to import a wide array of file types to the XM8Draw Interface, most of which is the .DXF extension. The Extension is like the last name of the file & show what type of file.
C) Beware of the DIRECTORY of course, but if your **'File of Type'** are not correct you filter out the files you are looking for and you will think they are gone when they are not check, **'All Formats'** if needed but ut the right type in before importing.

Figure 1-2

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw Functions Standard Bar



New Job
Ctrl-N

Open Job
Ctrl-O

Save Job
Ctrl-S

Import File
Ctrl-I

Refresh Screen

Pick Tool
Shift-J

Zoom In

Zoom Out
F3

Figure 4

topics

New & Open [Sec. 1](#)

Save & Import [Sec. 2](#)

Refresh & Pick Tools [Sec. 3](#)

Zooming Tools [Sec. 4](#)

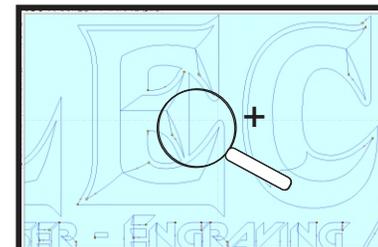


Figure 2

XM8Draw Standard Bar I

Goal: Files, Selection & Zooming

● Refresh & Pick Tools

A) If the screen becomes cluttered with vector lines you can click the **'Refresh Icon'** and it will clean up.
B) The **'Pick Tool'** is your most import icon in the fact that it allow you to exit tools so you can re-enter other tools.

C) The **'Pick Tool'** is the selection tool you can click on an object, or **'Pull & Drag'** a marquee box around a many objects. Place the mouse to the Top/Left of the object(s) or hold the Left key down pull down and across the let go of the left mouse key to select the group of objects.

● Zooming Tools

4- A) Being able to see what you are working is important both up close and from distance.
B) Click the **'Zoom In Icon'** and ;Pull & Drag' a zoom marquee around what wish to Zoom in on.
C) Click the **'Zoom Out Icon'** and continue to click it to active what wish to *Zoom out* of. There are many other view icons we will discuss in the future pages. Remember, once you zoom in and make changes always zoom out to check the overall layout for correctness, so to caught the mistakes quickly.

Figure 3



Figure 1



Define Cut Route

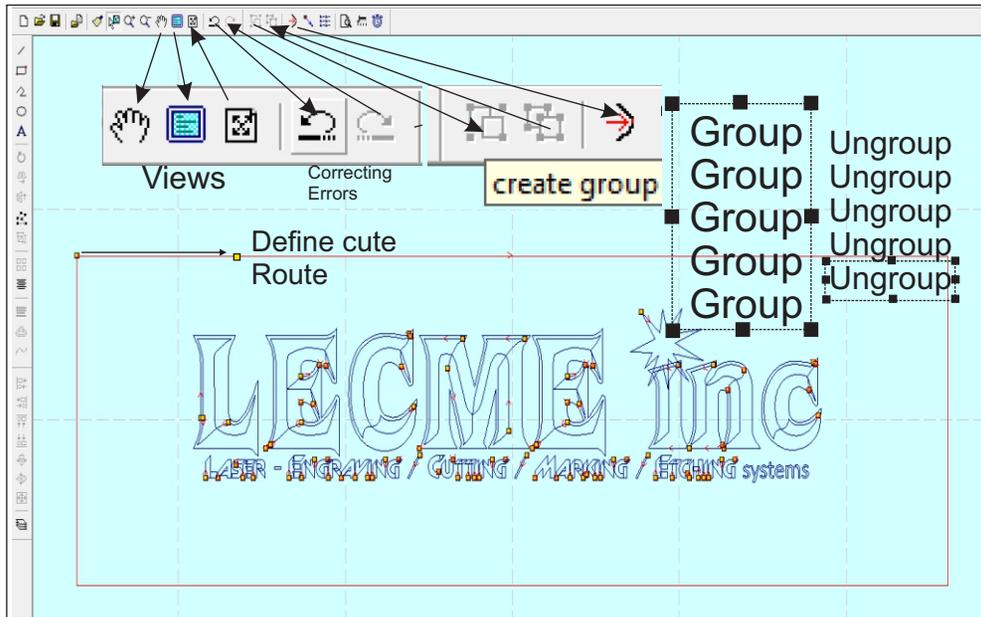
1. Have Vector on Screen
2. Select it
3. Click on the Define Cut Route Tool
4. Click on the Start Node
5. Move to where you wish it to be.

- Pan & Zoom to Table
1. **A)** The 'Pan Icon' will allow you to click on the 'Pan Tool' and pull the view around to a particular spot you are attempting to view more clearly.
B) You will see a **guiding line** draw out from the spot where you first click to the spot you are going.
C) the 'Zoom to Table Icon' will quick let you see the table as a whole from whatever zoom position you are in. It also refreshes the screen automatically when do this command.
- Zoom to Objects & Undo/Redo
2. **A)** When you click the 'Zoom to Object Icon' the view become close up on the object as whole on the screen, and refresh as well to clean up you view to the graphics.
B) If you hot **Ctrl-Z** on th Keyboard you will UnDo any errors you have created on your layout in the order they were made.
C) If you Undo to far you can hit **Ctrl-R** on the Keyboard and rotate back on the order of Creation and re-add cleared items to the layout. These two commands will be you friend to getting back to a good spot in the creation of your layout, if you make a mistake. They are better used by the keyboard, but can be used off the Pull-Down menu with the mouse.

Figure 1-2

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw-B

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TRAINING VIDEO



XM8Draw Functions Standard Bar

- Pan
- Zoom to Table
Shift-F4
- Zoom to All Objects
F4
- Undo
Ctrl-Z
- Redo
Ctrl-R
- Group
- Ungroup
- Define Cut Route

Figure 4

For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

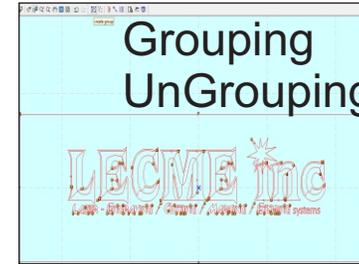


Figure 2

XM8Draw Standard Bar II

Goal: Views, groups & Cut Route

- Group/Ungroup
3. **A)** When doing Alignment of object on the Page you may have to Group or Group selections to get the positioning to work correctly.
B) If you select many lines of text and pull a Marquee selection box around them. The 'Group Icon' and the selection items will Group together as one Selection.
C) The same goes for the a Group selection of many items if you click on it to select it, and click the 'Ungroup Icon' the group will return to individual items for selection and control. This works on Object, text and line art logos as well.
- Define Cut Route
4. **A)** The "Define Cut Route Icon" is used to control Vector Cut starting points.
B) You will see a small Yellow Node box in the rectangle for example.
C) Click the 'Define Cut Route Icon' and click on the rectangle to move the starting pint on where the laser will first hit the material to begin to **cut it out**. This is big when it comes to lead in to a cut, where you start laser cutting through the material then travel to the cutout making a cleaning cutting pass.

Figure 3

topics

- Pan & Zoom to Table [Sec. 1](#)
- Zoom to Object & Undo/Redo [Sec. 2](#)
- Group/Ungroup [Sec. 3](#)
- Define Cute Route [Sec. 4](#)



Figure 1



Array Setting

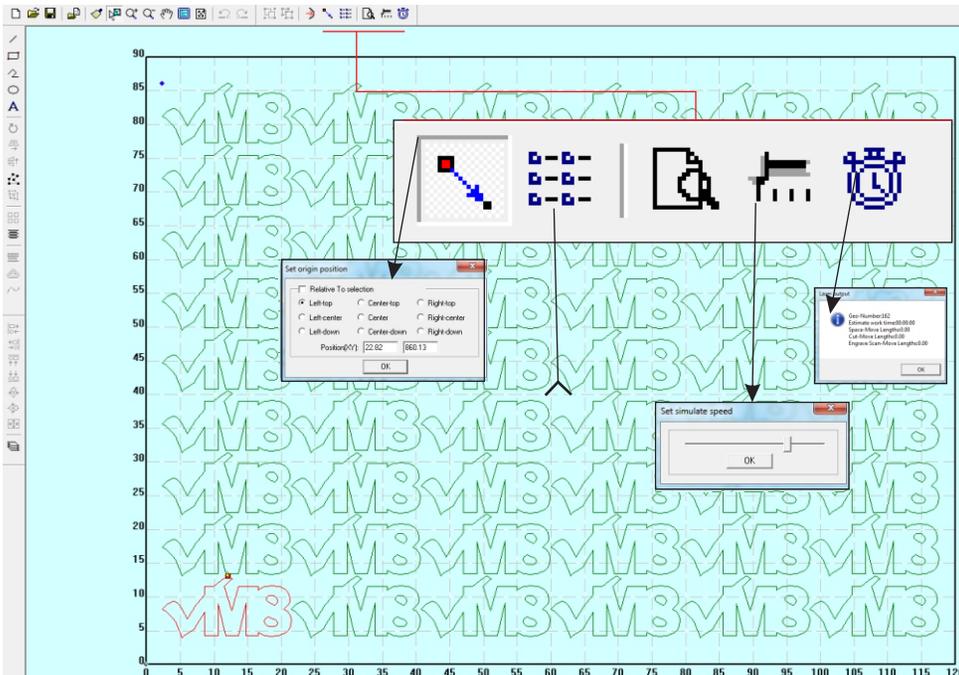
1. Object on page
2. Click the Set Array
3. Input to Dialog
4. Remember Gaps
5. Click 'OK'

- Set Knife Origin
1. **A)** When a Laser or CNC-Router the Origin point is direct relationship to where you start the laser origin point on the Laser controls, they must match.
B) On the **Standard Bar** click he 'Set Knife Origin' and you will get the *Set Knife Origin* dialog box.
C) When the Dialog appear you nine origin spots to select from Normally we just choose Top/Left. It will show you where your selection it on the table and can click '*Relative to selection*' but mostly you do not need to do this, to get the unit laser in the right spot.
- Set Array Output Options
2. **A)** The '**Set Output Array Options**' icon works very close it the Copies from the Tool-Kit.
B) But it generates a series of columns and row that can to be selected, but has better dialog control before they generated.
C) But with this Array Dialog I can '*Auto Cover Calculation*' to cover a whole area of the plate. This will also fill just the area you tell it. You can also turn off the text and just see the Letter Box by clicking '*Array Data Only Draw Box*' to the box all is kerned into. Remember, the control is in the creation of the text first, with the '**Text Tool**' from the **Tool-Kit** to get the best effects to you layout, original must be right for the Array to right.

Figure 1-2

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw - B

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TRAINING VIDEO



XM8Draw Functions Standard Bar



Set Knife Origin

Set Array Output Options
F9

Simulate
Ctrl-B

Set Simulate Speed

Estimate Work Time
F10

For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Set Knife Origin Sec. 1
- Set Array Output Options Sec. 2
- Simulate & Set Stimulate Speed Sec. 3
- Estimate Work Times Sec. 4

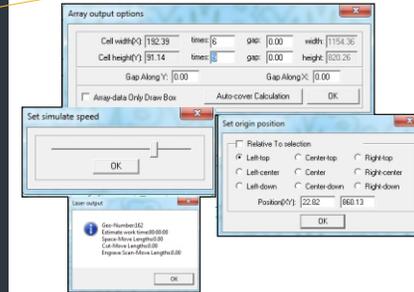


Figure 2

XM8Draw Standard Bar III

Goal: Origins, Array, Simulation & Time

- Simulate & Set Stimulate Speed
 - Estimate Work Time
3. **A)** To Simulate the Engrave or Cut features of the XM8Draw Interface, First have your layout on the page.
B) Now on the Standard bar click the '**Set Simulate Speed**' and pull the Slider to the Right.
C) Next the 'Click the **Simulate**' Icon on the **Standard Bar** and the Screen will show you how the layout will laser based on the Order and Modes of the Machine Controls have place on it. If not what you wish made changes and run again. You get to see what the job will do without wasting materials, time and MONEY.
 4. **A)** Though not calibrated yet, there is a '**Estimate Work Time**' Icon to use.
B) Once the Layout is ready and you have run the Simulate and are happy.
C) Click the '**Estimate Work Time**' and the program interface will produce and a Dialog of date for you and the your job. This can used to Base Park your Pricing estimate to the client or see if you will hit deadlines for you clients job. Remember, it is an estimate, a educated guess.

Figure 3

Figure 4



Figure 1



Print

1. Finish Layout
2. Click the File Pull-Down Menu
3. Click Print
4. Select Printer
5. Print-Out

● File Pull-Down

1. **A)** Click the **File** Pull-Down menu and click **New** or on your Keyboard you can hit **Ctrl-N** or just click the icon on the Standard Bar, this is normal in most programs.

B) In this section we attempt to cover those commands not already covered or reinforce more important commands. On the Menu Bar you will see a single letter in brackets. If you hold the **ALT** key down and hit that Letter you will open that Pull-Down.

C) **'Export'** command will allow you to take layouts created in XM8Draw and bring them to other programs. **Ctrl-E** and choose the *File type* and *Directory* to save it into. It is a good to create logos to use with other XM8Draw Layouts.

● Machine Options

2. **A)** The **'Machined Options'** are the Defaults and Parameters it takes to run the laser correctly. So you not change anything in this section without being very sure of what you are doing.

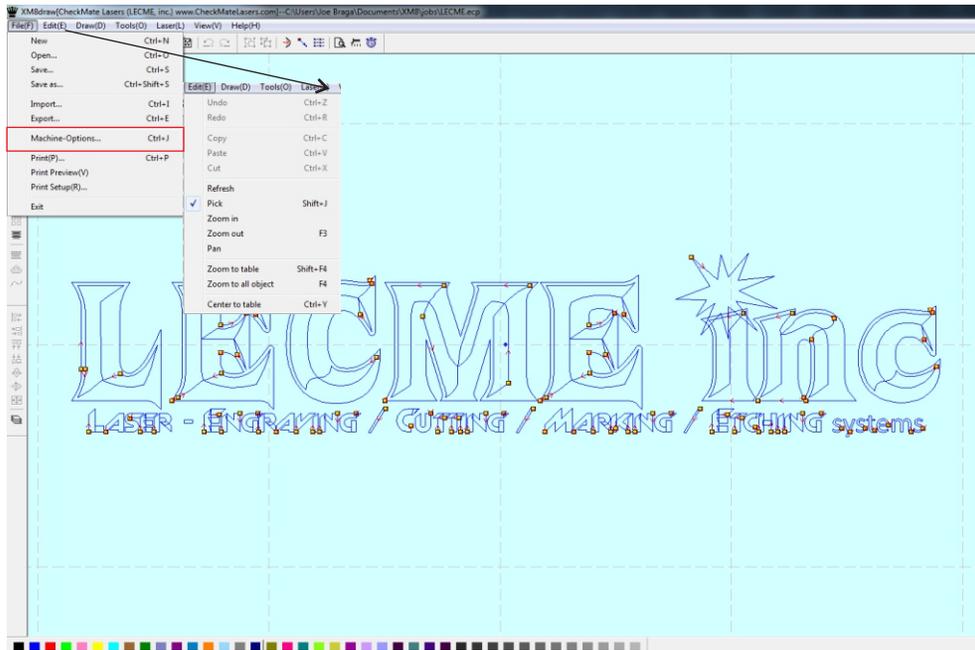
B) Hit **Ctrl-J** on the Keyboard and once in the dialog you will see the 'Machine Options' section. This all the Defaults for you Laser.

C) The **'Work Mode'** area has all the parameter for the setting up modes like cut & engrave. It also has the ability to raster form the bottom up or Top down. I prefer bottom up raster-ing as it draw the fumes to the exhaust better, thus cleaning the material. If I am laser plastics which are sticky the laser will re-burn the residue as it move from bottom of the Layout to the top.

Figure 1-

Checkmate Laser XM8Draw Training

Figure 3



B14 Menu Bar I.ecp

XM8Draw - B

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TRAINING VIDEO



For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- File Pull-Down Sec. 1
- Machine Options Sec. 2
- Print Sec. 3
- Edit Pull-Down Sec. 4

XM8Draw Functions Pull-Down Menus
File(F)

New	Ctrl+N
Open...	Ctrl+O
Save...	Ctrl+S
Save as...	Ctrl+Shift+S
Import...	Ctrl+I
Export...	Ctrl+E
Machine-Options...	Ctrl+J
Print(P)...	Ctrl+P
Print Preview(V)	
Print Setup(R)...	
Exit	

Edit(E)

Undo	Ctrl+Z
Redo	Ctrl+R
Copy	Ctrl+C
Paste	Ctrl+V
Cut	Ctrl+X
Refresh	
✓ Pick	Shift+J
Zoom in	
Zoom out	F3
Pan	
Zoom to table	Shift+F4
Zoom to all object	F4
Center to table	Ctrl+Y

Figure 4

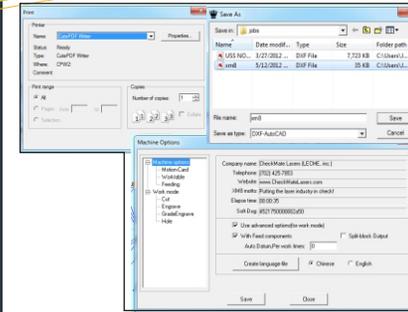


Figure 2

XM8Draw Menu Bar I

Goal: File & Edit Pull-Down Menus

● Print

3- **A)** Click the **File** Pull-down menu and click **Print**, or Hit **Ctrl-P** on the Keyboard.

B) There is also a **'Print Preview'** That can use to see your output.

C) The **'Print Setup'** will allow you to chose the printer you wish. If you download from the Internet the **'CutePDF'** Driver you can then make a PDF of the layout to send to your clients for approval. Thus saving you time and material if there is a error. Corel already has the a PDF writer within the program to use.

● Edit Pull-Down

4- **A)** The **'Edit'** Pull-Down menu has all the general command that most program have in this section.

B) If you wish to mouse the UnDo & Redo Commands this is where to do it..

C) The **'Ctrl-Y'** or 'Center to Table will allow to center to the Table any object or line to is selected. You will see this command on the **Tool-Kit** as well. If you wish to many objects **Group** them first then hit **Ctrl-Y** to center the group or single selection to the Table itself.

Figure 3



Figure 1



Half Bitmap

1. Import Bitmap

2. Select Bitmap

3. Click Tools

Pull-Down Menu

4. Click Half Bitmap

5. Click 'OK'

● Code Text

1. **A)** Under the Draw Pull-Down Menu it eh '**Code Text**' Command, it similar to the '**Text**' command but with much more control.

B) You have more sizing and font control, click '**Code Text**' and Pull and Drag a box open. Type in the Text.

C) In the future this will be where we can do Variable text, but just the '**Special Text**' and type what text you wish. With Variable text we be able to input text for the notepad or excel in to the array and create layout with variable names for example. This mean the client is responsible for the correctness of the names. You can do this in Corel but is much easier to use the 'Print Merge' section of Corel with a Macro add-on.

● Draw Pull-Down

2. **A)** When you look at the '**Draw**' Pull-Down Menu the majority of the commands have been covered in the Tool-Kit section.

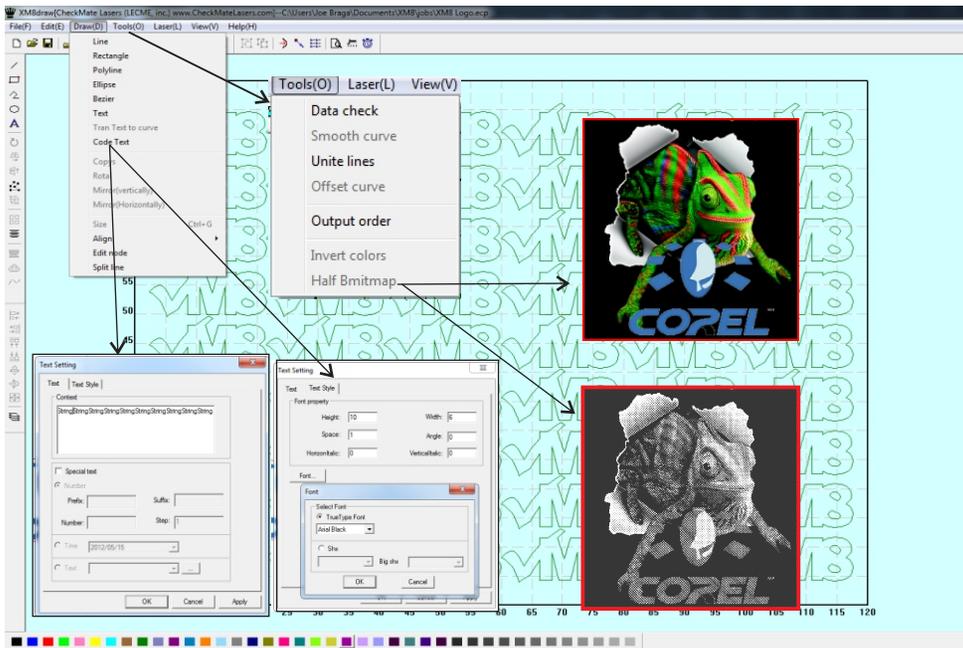
B) The '**Bezier Tool**' is like the '**Polyline Tool**', but it allows you to shape curves and control them better and they can you used together, as you can many of the Draw tools. Just click it and on the second click the hld the left mouse key down and pull it around

C) You can use the '**Spilt Line Tool**' to separate a solid line into two sections. Click on the line and click again to the area you wish brake apart. If wish to type along a curve that is on the screen, just go into the Text mode and it will ask you. There is no other command that is ready needed, just watch your Kerning.

Figure 1-

Checkmate Laser XM8Draw Training

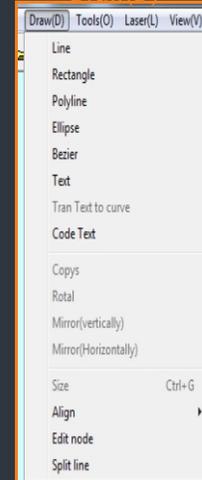
Figure 3



B15 Menu Bar II.ecp



XM8Draw Functions Pull-Down Menus Draw(D)



Tools(O)



Figure 4

topics

Code Text Sec. 1

Draw Pull-Down Sec. 2

Unite Lines Sec. 3

Tools Pull-Down Sec. 4

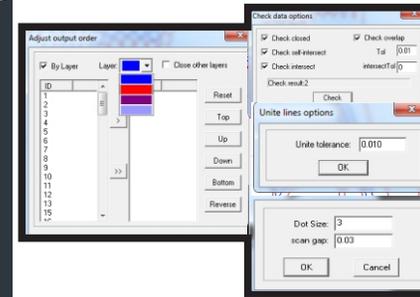


Figure 2

XM8Draw Menu Bar II

Goal: Draw & Tools Pull-Down Menus

● Unite Lines

3. **A)** The '**Unite Lines**' commands will close the nodes on a vector line that you have split.

B) When you click the '**Unite Line**' Command you will see a Tolerance dialog come up. This si area you wish it cover.

C) If you Unite close object they will not unite. but if you '**Split Line**' sections of the two boxes you can '**Unite Line**' once you use the '**Edit Node**' tool to move the nodes into place. This great for controlling both Vector 'Cut and Raster' Engrave' mode of Laser different Materials.

● Tools Pull-Down

4. **A)** The '**Data Check**' command allows you see if the image or layout is ready for processing. I always have it check everything.

B) '**Output Order**' command control when and if different colors will Engraver or Cut.

C) The '**Half Bitmap**' Will take a image and replace with a Half-tone image. Watch how fine you attempt to go , you can crash it if you are on low Ram. Great for Pictures into Wood or Plastics. Default settings are good to go for most Logos and Photos.

Figure 3





Array Setting

1. Text on page
2. Click the Set Array
3. Input to Dialog
4. Click the 'Auto Cover Calculation'
5. Click 'OK'

● Laser Pull-Down

1. **A)** Again this another Pull-Down that majority commands where already covered in the **Standard Bar** Section.
B) There is a '**Clear Log**' Which clear all the old data out to make room for the new information. Use it if your calculation or any operation is just not working correctly.
C) The '**Simulate**' command is here and very useful to show the order of engraving is correct that you have Engrave vs. correct and the you Origin is right. This feature again will save you material, time and thus money. I use it allot to as I dry before going to the laser itself.

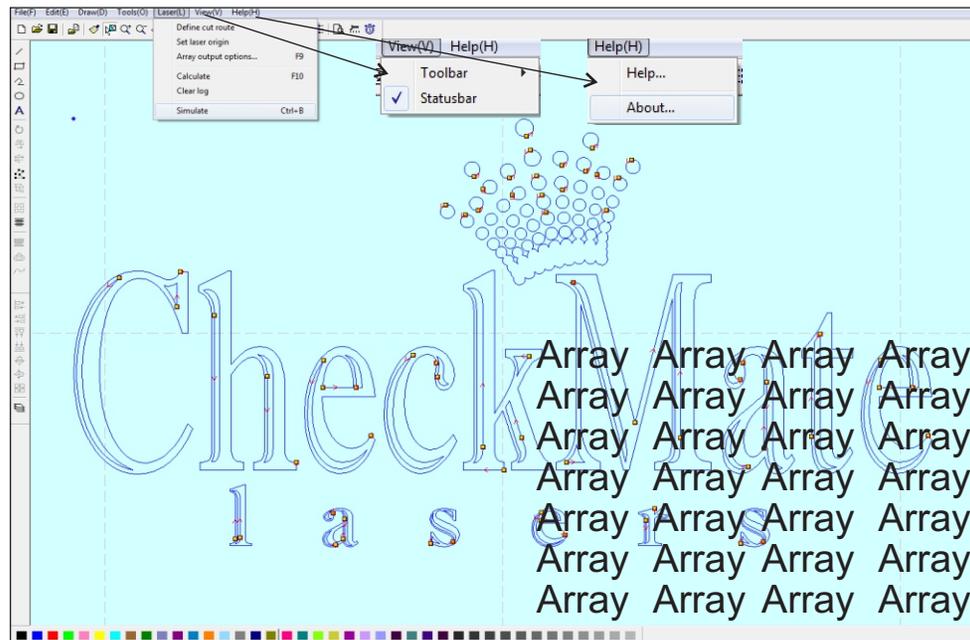
● Laser Array

2. **A)** The 'Laser Array' or '**Set Array Output Options**' Is important as it future is bright and be used for many Multiple plate inputs.
B) The real critical value to input is the '**X Gap**' this will create a border or margin between rows.
C) Input the '**X Gap**' first this the balance of Rows and Column to the dialog. Remember you can tell it to auto-cover a specific area or just see the Letter box without the graphic. You can add a Cut Vector to the layout and it will auto correct to it. You add it to the bottom left cornered layout and it adjust automatically for the balance of rows and columns. This is a great time when making badges or trophy plates that are the same information.

Figure 1-

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw-B

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TRAINING VIDEO



For the
Industrial,
Signage, Recognition
& Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Laser Pull-Down [Sec. 1](#)
- Laser Array [Sec. 2](#)
- View Pull-Down [Sec. 3](#)
- Help Pull-Down [Sec. 4](#)

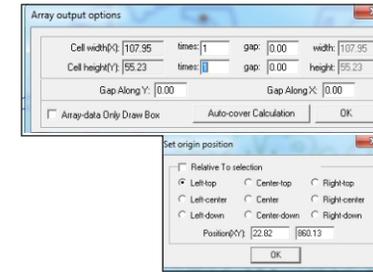


Figure 2

XM8Draw Functions Pull-Down Menus

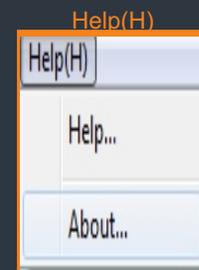
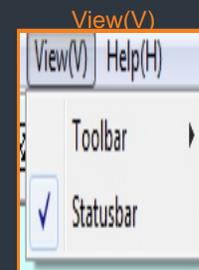
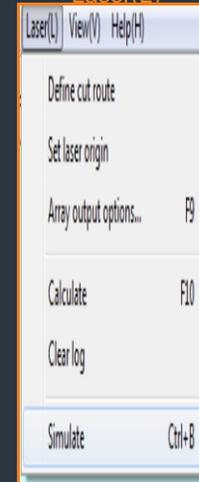


Figure 4

XM8Draw Menu Bar III

Goal: Laser, View & Help Pull-Down Menus

● View Pull-Down

3. **A)** The '**View**' Pull-down menu has a '**Status Bar**' that can be click on.
B) It will show the '**X-Y Coordinates**' of the mouse, '**Download Status**' form the '**Machine Controls**' and '**Work time**' once the job is done.
C) You can also turn off OFF and ON certain sections of the Tool-Bar or Tool-Kit to streamline the options you to choose from. But the Work time is your biggest values as it saves it with the job itself. To be recalled later for Pricing and lead-times to Completion.

Figure 3

● Help Pull-Down

4. **A)** Under the '**Help**' Pull-Down menu the '**Help**' command should open this PDF manual.
B) The '**About**' Command gives of the Main Factory's contact Phone number.
C) Two feature not listed in **Ctrl-A** for **Select All** which select all item on the screen or Page. The '**Nudge**' controls on the Keyboard arrows.. Select the object and hit the Arrow key to move it. Holding the **Ctrl** key down give you a Micro-Nudge like in Corel.



Figure 1



Machine Controls.

- 1. Assign Modes
- 2. Speed & Power
- 3. Download to Laser
- 4. Focus
- 5. Hit Start

● Layers & Modes

1. **A)** Once the layout is Complete whether it came from Corel or was constructed in the XM8Draw interface we are ready to apply the Machine Controls to the graphic.

B) The Number of **Layers** and their order is control in he Interface and are assigned from the Color Pallet.

C) The Mode is assign **Engrave** for Raster and **Cut** for Vector. The GradeEngrave and Hole is for drill Holes and the Grade engrave is for precise Raster-ing of images both are used very often. The Mode section is very important the finished product must align with your choices for the layout.

● Speed & Power

2. **A)** **Power** of the laser firing at the material is in direct relationship to the **Speed** the Laser beam to moving through the material..

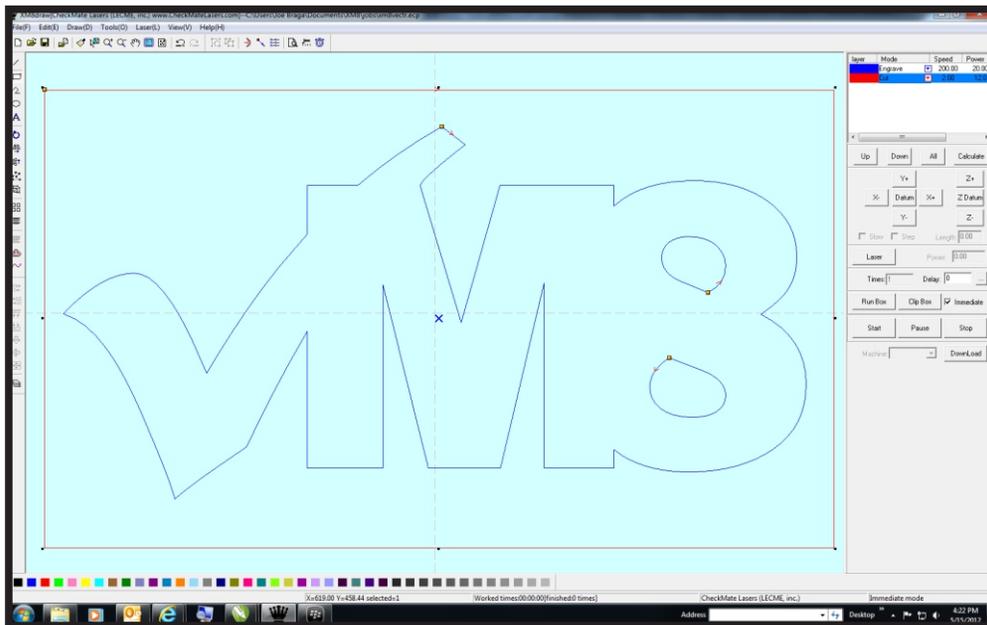
B) So if 50% power at 50% speed is cutting 1/8 into a material , 100% power at the same sped will cut in deeper, Or 50% power at 100% speed will cut in less deep.

C) Assign **Power and Speed** to the **Engrave** color and Power and Speed to the **Cut** Color. Normally, Vectoring is for cutting all the way through a piece of Material, But sometimes it is used to draw in details of a graphic at lower power or faster speed. Usually using a third color for that section of the graphics. This is big with the Scrapbook clients that need Score line to fold paper.

Figure 1-

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw-B

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TRAINING VIDEO



XM8Draw Functions
Machine Controls



Figure 4

For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Layers & Modes [Sec. 1](#)
- Speed & Power [Sec. 2](#)
- Datum Controls I [Sec. 3](#)
- Send to Laser [Sec. 4](#)

layer	Mode	Speed	Power
Engrave	Engrave	200.00	20.00
Cut	Cut	2.00	12.0

Figure 2

XM8Draw Machine Control I

Goal: Basic Controls for the Laser

● Datum Controls I

3. **A)** You can use the Control on the Machine Control section fo the interface to jog the X & Y and raise and lower the table or Z axis.

B) You should have a 'Knife Origin Set' in the Interface and the Controls of the Laser to the Top/Left corner of your Plate.

C) You should already have the laser focus by first the lower the table so the material is below the laser lense 3 inches or so. Then raise the table until the two Focus Diode light merge together as one. This is very Important.

Figure 3

● Send to Laser

4. **A)** So lastly, go to the Machines Controls and click '**Download**' and '**Download, Current**'. **B)** Next to the laser control panel or pendant see the job is loaded and hit '**Start**'.

C) Watch the Laser engrave, verify water Chiller is running and the Air Assist is on. You have no Flame up if you do just the laser and adjust the Power and Speed. Remember, there are suggestion to Power and Speed by Material and Wattage of tube in the Main Corel Basic-I manual you got.



Figure 1



Machine Controls.

1. Assign Modes
2. Speed & Power
3. Download to Laser
4. Focus
5. Hit Start

● File Control

1. **A)** File Control is important to Total Productivity, You will see the files that where downloaded to the Physical Laser for that Process.
B) You should have notes in the Notepad of 'Windows' that are titles the same as the job the go to.
C) This will help with Pricing, shipping, material etc. ANYTHING the laser does not save with the job. I normally have a template or you can do this in a Excel spread sheet. But To look what you did any day of the Month Quarter of Year is helpful to repeat client and keeping your taxes.

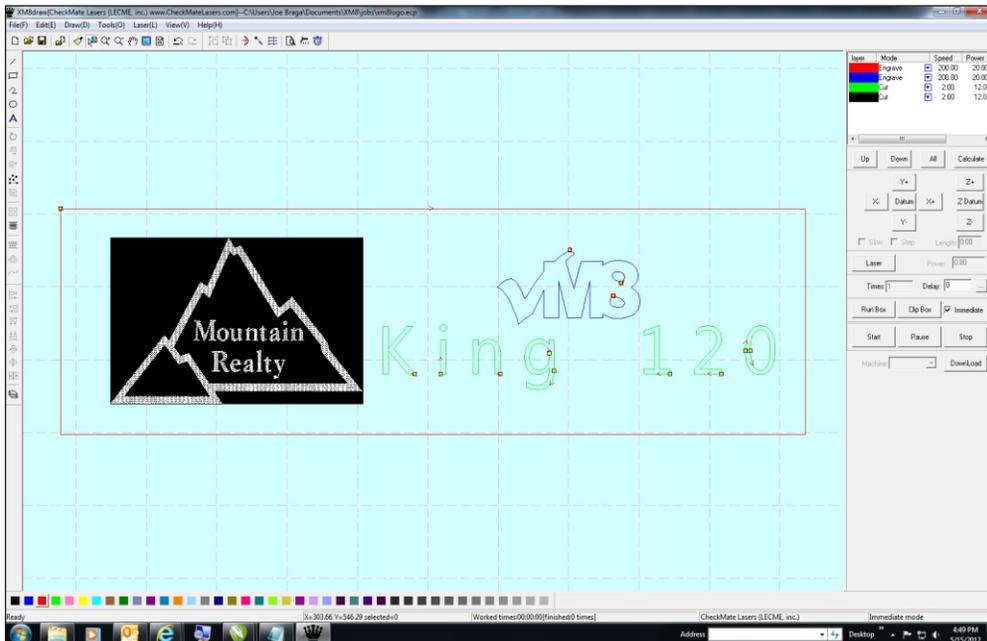
● Testing Position

2. **A)** Within the XM8Draw Interface is a Position Box to help determine wether we are lined up on the material correctly.
B) In the Machine Controls Click 'Run Box' and 'Download', and 'Download Current'
C) The laser lense will go out using the Red Positioning Diode draw box around just where the engraving will be on the plate. Then you can make adjustment to the 'Set Origin' on the laser itself and rerun the 'Run Box' until it is correct. You can also laser onto the Laser Tape or thin Acrylic to see where the layout will go . Then adjusts you make Physically are important notes so that you may repeat the positioning for multiple parts.

Figure 1-

Checkmate Laser XM8Draw Training

Figure 3



XM8Draw Functions
Machine Controls

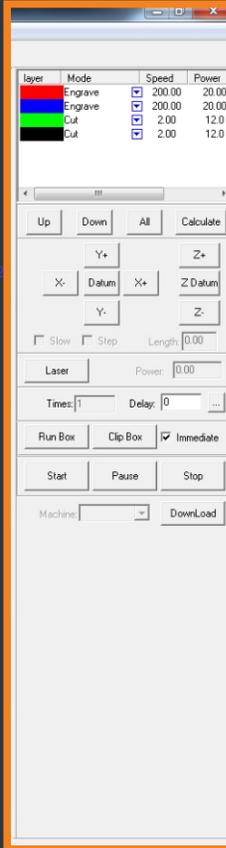


Figure 4

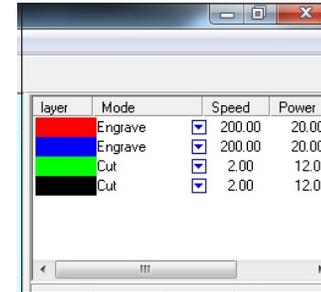


Figure 2

XM8Draw Machine Control II

Goal: More Controls for the Laser

● Datum Controls II

3. **A)** On Jog Controls on the Machine Controls you can slow it down or go to a Step function for Precision.
B) You can also Calculate the job from the Machine Controls.
C) You can Stop the Job Running from here Pause or re-Start. You may take the "Immediate Key" Off and put in a delay to get the Exhaust Blower up to speed before it beginning Laser the Material. But the 'Run Box' it the most helpful command there is in this section of the Machine Controls. Positioning correctly is Crucial.

Figure 3

● Beam Test

4. **A)** There is a Test Beam function that you use when doing Beam alignment and tube firing testing.
B) Hit the 'Laser' on the Machine Controls' and the tube will at whatever power is in the first layer.
C) You must Click again to turn the Laser Beam off or it keep Firing. You can do the from the Laser Control Panel and when you let go of the Button it just stop firing. This is a much safer way of using this feature ans the one I use to test fire the laser beam.



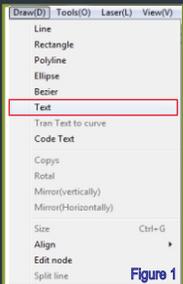


Figure 1

Major Steps to Laser

1. Complete Layout
2. Set Knife Origin
3. Set Machine
4. Material to laser
5. Focus & Run

Controls

Checkmate Laser XM8Draw Training



Figure 3

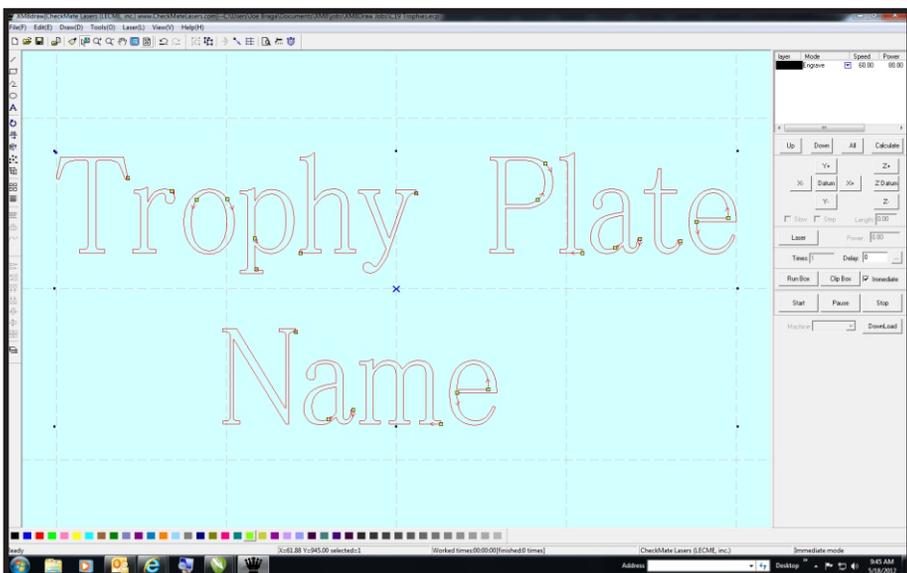


Figure 4

● Perp Laser & Focus

1. **A) Make sure the Laser is ON & Functioning**, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set 'Origin' usually to the Top/Left corner, but usually to whatever You set the "Set Knife Origin" to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Trophy Plate I

2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-



Projects for XM8Draw

Tool-Kit



layer	Mode	Speed	Power
	Engrave	<input checked="" type="checkbox"/> 60.00	80.00

Up Down All Calculate

Figure 2

topics

- Perp Laser & Focus Sec. 1
- Layout Trophy Plate I Sec. 2
- Layout Trophy Plate II Sec. 3
- Positioning & Setting Sec. 4

Project Laser Trophies

Goal: Trophy Plates on the Laser

● Layout Trophy Plate II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. Group the layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and Save.
C) Review: Simple Trophy plates are a Slam Dunk for most program even Interfaces like XM8Draw, But still do them in Corel.

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Trophy Plate** Usually 100% speed and 100% power gets it done on covered laser-able plates.
C) Notes: If you See Dull Letters it is not Laser-able Metals. If it Vectors (Cut) you did not change your 'Mode' to 'Engrave' or Raster. Save the Job with Setting labeled for that material and for the that client for future use.



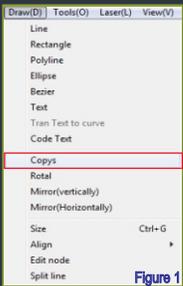


Figure 1

Major Steps to Laser

1. Complete Layout
2. Set Knife Origin
3. Set Machine
4. Material to laser
5. Focus & Run

Controls

Checkmate Laser XM8Draw Training



Figure 3

- Perp Laser & Focus
 1. **A) Make sure the Laser is ON & Functioning**, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
 - B) Place the Material into the Laser and set 'Origin'** usually to the Top/Left corner, but usually to whatever You set the "Set Knife Origin" to in the Interface.
 - C) Now 'Perform a FOCUS to the Material'**, just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.
- Layout Badge I
 2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
 - B) Step Two:** Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
 - C) Step Three:** While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-

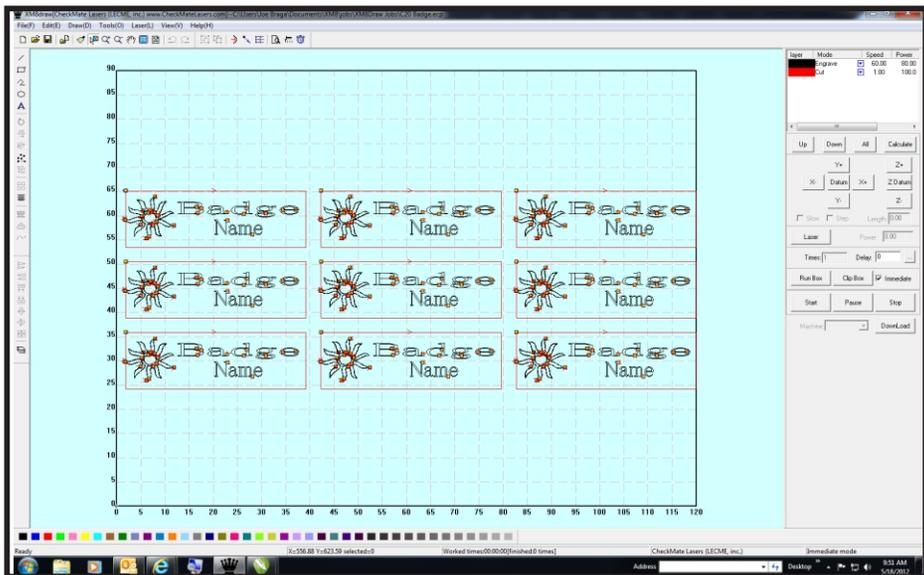


Figure 4



Projects for XM8Draw

Tool-Kit



layer	Mode	Speed	Power
Engrave	<input checked="" type="checkbox"/>	60.00	80.00
Cut	<input checked="" type="checkbox"/>	1.00	100.0

Figure 2

Project Laser Badges

Goal: Name Badges on the Laser

- Layout Badge II
 - Positioning & Setting
3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what your wish.
 - B) Step Five:** Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. Group
 - C) Step Six:** Click the 'Copies Tool' input your Copies then **Ctrl-A** and 'Group' and **Ctrl-Y** to Center, Gap first on Copies.
 4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
 - B) Power & Speed:** Set the Power and Speed for a **Badges** are plastic 90% speed and 80% power gets it done on covered laser-able plates.
 - C) Notes:** If you See Dull Letters it is not Laser-able Plastic. If it Vectors (Cut) you did not change your 'Mode' to 'Engrave' or Raster. Save the Job with Setting labeled for that material and for the that client for future use.

Figure 3



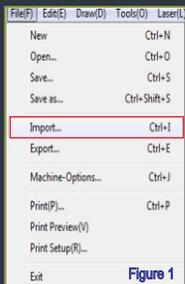


Figure 1

Major Steps to Laser

1. Complete Layout
 2. Set Knife Origin
 3. Set Machine
- Controls
4. Material to laser
 5. Focus & Run

● Perp Laser & Focus

1. **A)** Make sure the Laser is ON & Functioning, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set 'Origin' usually to the Top/Left corner, but usually to whatever You set the "Set Knife Origin" to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Plaque I

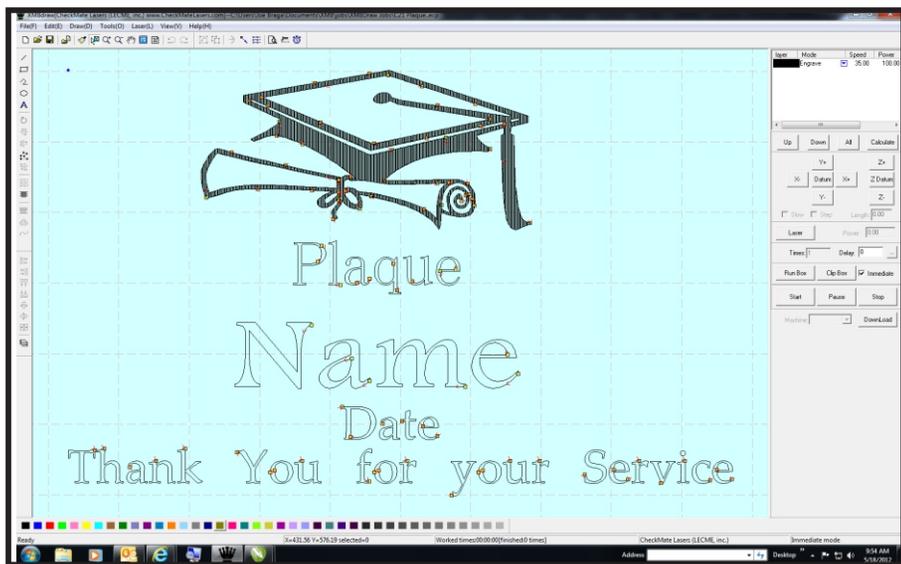
2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-

Checkmate Laser XM8Draw Training



Figure 3



XM8Draw - C

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TRAINING VIDEO



For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

Projects for XM8Draw

Tool-Kit



layer	Mode	Speed	Power
	Engrave	<input checked="" type="checkbox"/> 60.00	80.00

Up Down All Calculate

Figure 2

Project Laser Plaque

Goal: Plaques on the Laser

● Layout Plaque II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. Group the Layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and Save.
C) Review: Simple Plaques verify in material in this case Pressed Wood. Name is always a Different font from the Balance of the layout.

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Wood Plaques** Usually 65% speed and 100% power gets it done on covered laser-able plates.
C) Notes: Press Wood Plaques are easier to burn than hard-wood. Have different setting for Different woods plaques. Save the Job with Setting labeled for that material and for the that client for future use.

Figure 4

topics

- Perp Laser & Focus [Sec. 1](#)
- Layout Plaque Plate I [Sec. 2](#)
- Layout Plaque Plate II [Sec. 3](#)
- Positioning & Setting [Sec. 4](#)



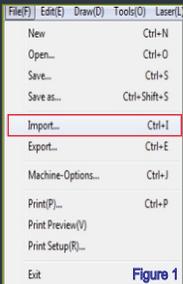


Figure 1

Major Steps to Laser

1. Complete Layout
2. Set Knife Origin
3. Set Machine
4. Material to laser
5. Focus & Run

Controls

● Perp Laser & Focus

1. **A)** Make sure the Laser is ON & Functioning, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set 'Origin' usually to the Top/Left corner, but usually to whatever You set the "Set Knife Origin" to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Business Card I

2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-

Checkmate Laser XM8Draw Training



Figure 3



Figure 3



Projects for XM8Draw

Tool-Kit



Figure 4

For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Perp Laser & Focus **Sec. 1**
- Layout Business Card Plate I **Sec. 2**
- Layout Business Card Plate II **Sec. 3**
- Positioning & Setting **Sec. 4**

layer	Mode	Speed	Power
Engrave	<input checked="" type="checkbox"/>	55.00	100.00
Cut	<input checked="" type="checkbox"/>	1.00	100.0

Up Down All Calculate

Figure 2

Project Business Card

Goal: Making Business Cards on the Laser

● Layout Business Card II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what you wish.
B) Step Five: Select the '8' and Group it then select 'Xm8' and align them top to bottom and Centered
C) Review: Import in the Bitmap and Center it position the Vectored Text as shown. Make the Rectangle & Cut Text the same color from the color pallet. This allows you to cut out the text with the outline. Control the order as this outline should be last or use a 3rd color.

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is Focused.
B) Power & Speed: Set the Power and Speed for a Flexi-Brass or thin Plastics Usually 90% speed and 100% power and 45\$ power at 25% speed for the Cut power.
C) Notes: Flexi-Brass will bent within reason and mold to not flat parts. It look like metal. But allow to Vector or Cut it out shapes. It is a great Product and I use all the time. Too much power will make it warp to tape it down.



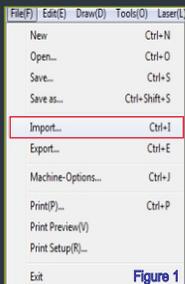


Figure 1

Major Steps to Laser

1. Complete Layout
 2. Set Knife Origin
 3. Set Machine
- Controls
4. Material to laser
 5. Focus & Run

● Perp Laser & Focus

1. **A)** Make sure the Laser is ON & Functioning, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.

B) Place the Material into the Laser and set '**Origin**' usually to the Top/Left corner, but usually to whatever You set the "**Set Knife Origin**" to in the Interface.

C) Now '**Perform a FOCUS to the Material**', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Wood Sign I

2. **A) Step One:** Draw box with '**Rectangle Tool**' and size it to Plate Size and pull it into a corner for now.

B) Step Two: Click on the '**Text Tool**' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.

C) Step Three: While in the '**Text Tool**' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-

Checkmate Laser XM8Draw Training

Figure 3



Figure 4

XM8Draw - C

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TRAINING VIDEO



Projects for XM8Draw

Tool-Kit



Offset Curve

For the
Industrial,
Signage, Recognition
& Marking Industries
X-GRAPHICS

XM8Draw Training

layer	Mode	Speed	Power
Engrave	Engrave	55.00	100.00
Engrave	Engrave	65.00	100.00
Cut	Cut	10.00	100.0

Figure 2

topics

- Perp Laser & Focus [Sec. 1](#)
- Layout Wood Sign Plate I [Sec. 2](#)
- Layout Wood Sign Plate II [Sec. 3](#)
- Positioning & Setting [Sec. 4](#)

Project Wood Sign

Goal: Wood Sign On the Laser

● Layout Wood Sign II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the '**Size Tool**' on the Tool-Kit and size to what you wish.

B) Step Five: Import in the Two Graphics logos and position them as shown.

C) Review: Select the border box and '**Offset Curve Tool**' and create a couple of rows. Make sure those are 'engrave' raster-ed and colored different and the outside box is a cut out or 'Cut'. This gives you burned border with your cutout of your shape or box, it cut any shape.

Figure 3

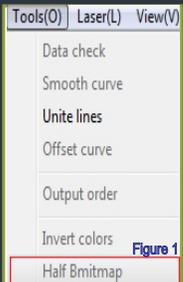
● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.

B) Power & Speed: Set the Power and Speed for a **Wood Sign**, usually is 45% speed and 100% power gets it done on covered laser-able plates, Cutting at 100% power and 5% speed.

C) Notes: If it Vectors (Cut) you did not change your '**Mode**' to '**Engrave**' or Raster. Save the Job with Setting labeled for that material and for the that client for future use (Watch for Flame-ups.)

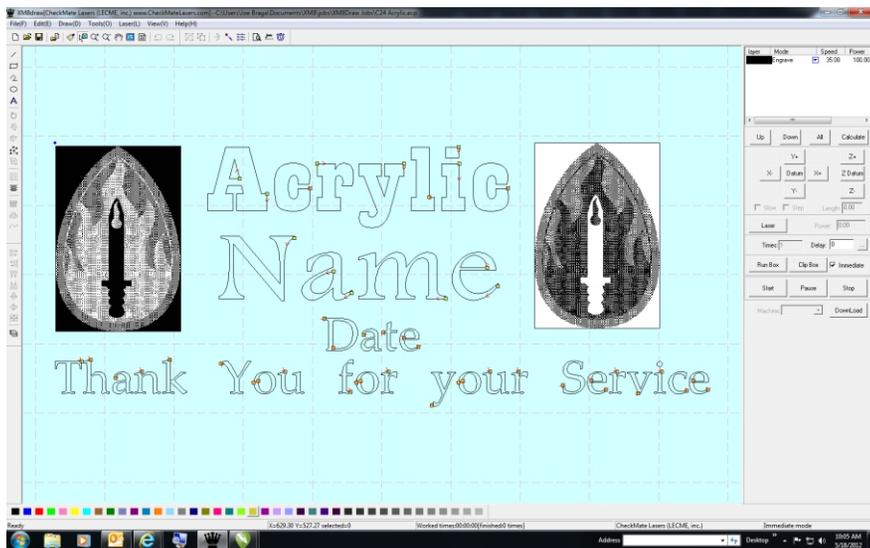




Major Steps to Laser

1. Complete Layout
 2. Set Knife Origin
 3. Set Machine
- Controls
4. Material to laser
 5. Focus & Run

Checkmate Laser XM8Draw Training



● Perp Laser & Focus

1. **A)** Make sure the Laser is ON & Functioning, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set '**Origin**' usually to the Top/Left corner, but usually to whatever You set the "**Set Knife Origin**" to in the Interface.
C) Now '**Perform a FOCUS to the Material**', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Acrylic Award I

2. **A) Step One:** Draw box with '**Rectangle Tool**' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the '**Text Tool**' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the '**Text Tool**' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-

XM8Draw - C
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TRAINING
VIDEO



Projects for XM8Draw

Tool-Kit



Figure 4

For the
Industrial,
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& Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Perp Laser & Focus* Sec. 1
- Layout Acrylic Award Plate I* Sec. 2
- Layout Acrylic Award Plate II* Sec. 3
- Positioning & Setting* Sec. 4

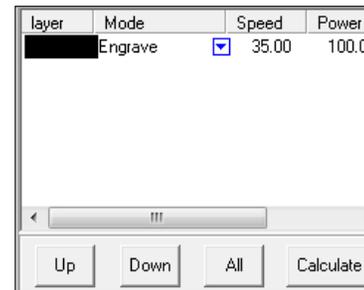


Figure 2

Project Acrylic Award

Goal: Making Acrylic Awards on the Laser

● Layout Acrylic Award II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the '**Size Tool**' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. **Group** the Layout as one selection and hit **Ctrl-Y** again.
C) Review: Import in the Bitmap, '**Tools**' Pull-Down and '**Half Bitmap**' **Copy & Paste**, (2nd Image) '**Invert Colors**' on one' & Position it Layout as shown & Save.

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Acrylic Awards** Usually 45% speed and 100% power gets it done on covered laser-able plates.
C) Notes: If you See letter quality it is not Raster Friend Acrylic. If it Vectors (Cut) you did not change your '**Mode**' to '**Engrave**' or Raster. Remember to do them Reverse Upside-Bottom as you are laser-ing the backside of the award.



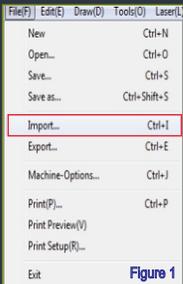


Figure 1

Major Steps to Laser

1. Complete Layout
2. Set Knife Origin
3. Set Machine
4. Material to laser
5. Focus & Run

Controls

Checkmate Laser XM8Draw Training



Figure 3



Figure 4

● Perp Laser & Focus

1. **A)** Make sure the Laser is ON & Functioning, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set 'Origin' usually to the Top/Left corner, but usually to whatever You set the "Set Knife Origin" to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Marble Award I

2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-

XM8Draw - C
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TRAINING
VIDEO



Projects for XM8Draw

Tool-Kit



For the
Industrial,
Signage, Recognition
& Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Perp Laser & Focus [Sec. 1](#)
- Layout Marble Award I [Sec. 2](#)
- Layout Marble Award II [Sec. 3](#)
- Positioning & Setting [Sec. 4](#)

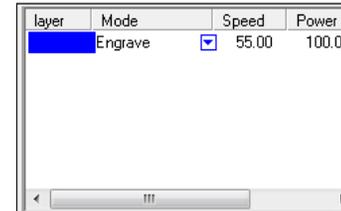


Figure 2

Project Marble Award

Goal: Marble Awards on the Laser

● Layout Marble Award II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. Group the Layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and Save.
C) Review: With **Marble** you may have to run it twice to get the look you are wanting. Especially Tiles and Granite tone, glass, as well.

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Marble** Usually 25% speed and 100% power gets it done on covered laser-able plates.
C) Notes: Larger Checkmate laser have very strong Z-Axis or Tables with big motors so you can power allot of weight. I adjust the table to the height and then mount a heavy item to the laser, this saves the platform.



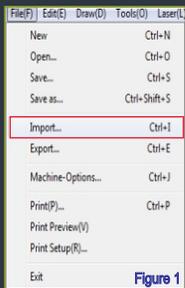


Figure 1

Major Steps to Laser

1. Complete Layout
 2. Set Knife Origin
 3. Set Machine
- Controls
4. Material to laser
 5. Focus & Run

● Perp Laser & Focus

1. **A)** Make sure the Laser is ON & Functioning, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set 'Origin' usually to the Top/Left corner, but usually to whatever You set the "Set Knife Origin" to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Stainless Plate I

2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1

Checkmate Laser XM8Draw Training

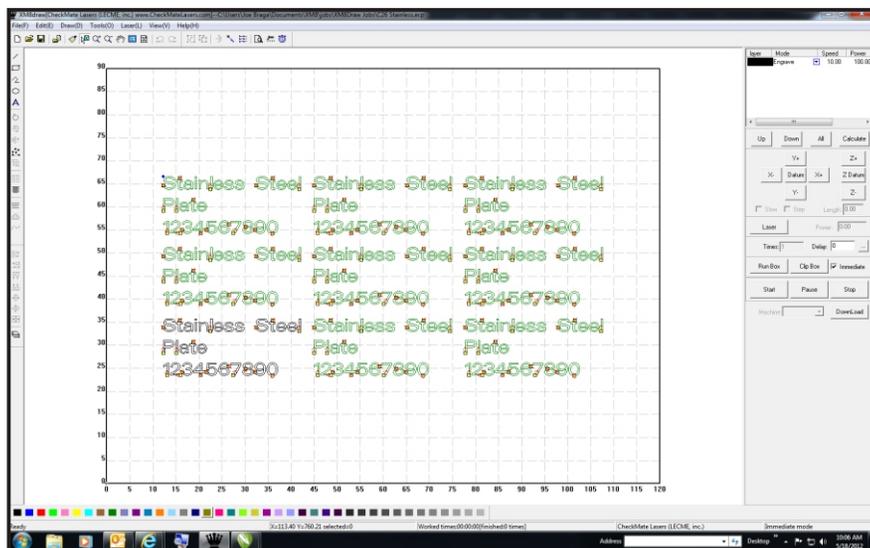


Figure 4

XM8Draw-C

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TRAINING
VIDEO



Projects for XM8Draw

Tool-Kit



For the
Industrial,
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X-GRAPHICS

XM8Draw Training

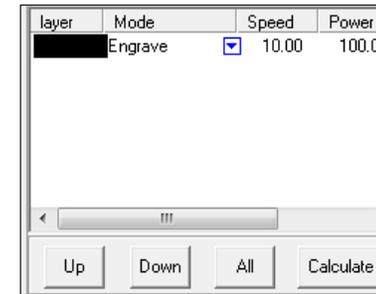


Figure 2

topics

- Perp Laser & Focus Sec. 1
- Layout Stainless Plate I Sec. 2
- Layout Stainless Plate II Sec. 3
- Positioning & Setting Sec. 4

Project Stainless Plate

Goal: Themark on Stainless Steel.

● Layout Stainless Plate II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. Group the Layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and Save.
C) Review: With Stainless you will use the Themark spray, that allow you mark un-coated metals especially Stainless

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Un-coated Metal** Usually 10% speed and 100% power gets it done on covered laser-able plates.
C) Notes: With the Themark you spray it on the plate in open area or outside and et dry completely. Laser it and the wash off with Water. Remember to always wash your hand after or where gloves it comes in a few colors.



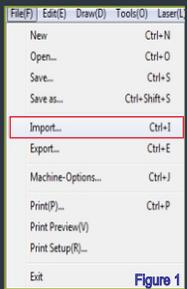


Figure 1

Major Steps to Laser

1. Complete Layout
 2. Set Knife Origin
 3. Set Machine
- Controls
4. Material to laser
 5. Focus & Run

● Perp Laser & Focus

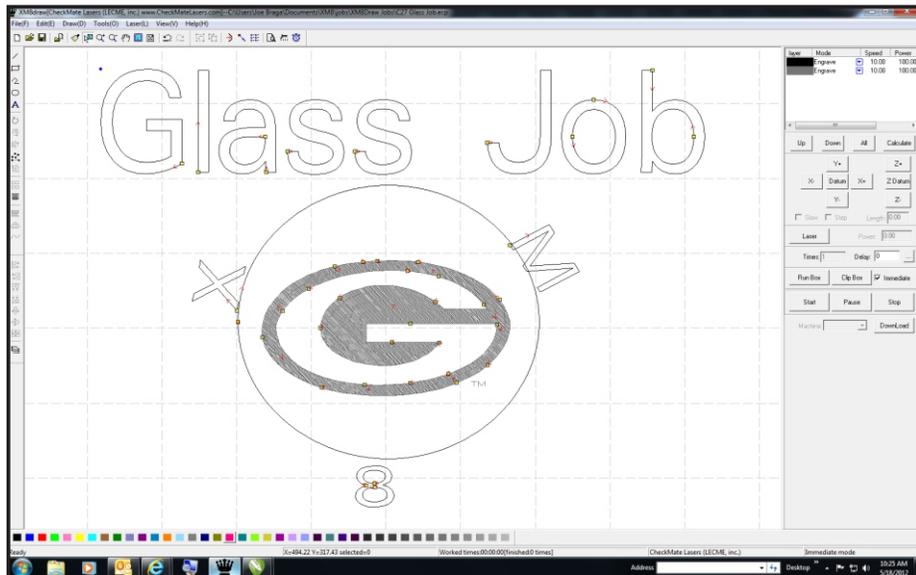
1. **A) Make sure the Laser is ON & Functioning**, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set 'Origin' usually to the Top/Left corner, but usually to whatever You set the "Set Knife Origin" to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Glass Job I

2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-

Checkmate Laser XM8Draw Training



Projects for XM8Draw

Tool-Kit



Figure 4

layer	Mode	Speed	Power
	Engrave	<input checked="" type="checkbox"/> 10.00	100.00
	Engrave	<input checked="" type="checkbox"/> 10.00	100.00

Figure 2

topics

- Perp Laser & Focus [Sec. 1](#)
- Layout Glass Job I [Sec. 2](#)
- Layout Glass Job II [Sec. 3](#)
- Positioning & Setting [Sec. 4](#)

Project Glass Job

Goal: Laser onto Glass Round/Flat

● Layout Glass Job II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. Group the layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and Save.
C) Review: Many Glass awards are laser upside down and reverse like Acrylic Awards, Round Glasses or Mugs or course are not.

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Glass Jobs**, Usually 35% speed and 100% power gets it done on covered laser-able plates.
C) Notes: There is a PDF in the Training information on using the Round devise it controlled at the Laser itself. With Glass you will put dish soap on the glass or Laser tape to keep the chipping down & get a better Look.



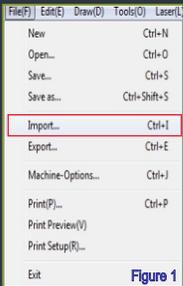


Figure 1

Major Steps to Laser

1. Complete Layout
2. Set Knife Origin
3. Set Machine
4. Material to laser
5. Focus & Run

Controls

Checkmate Laser XM8Draw Training



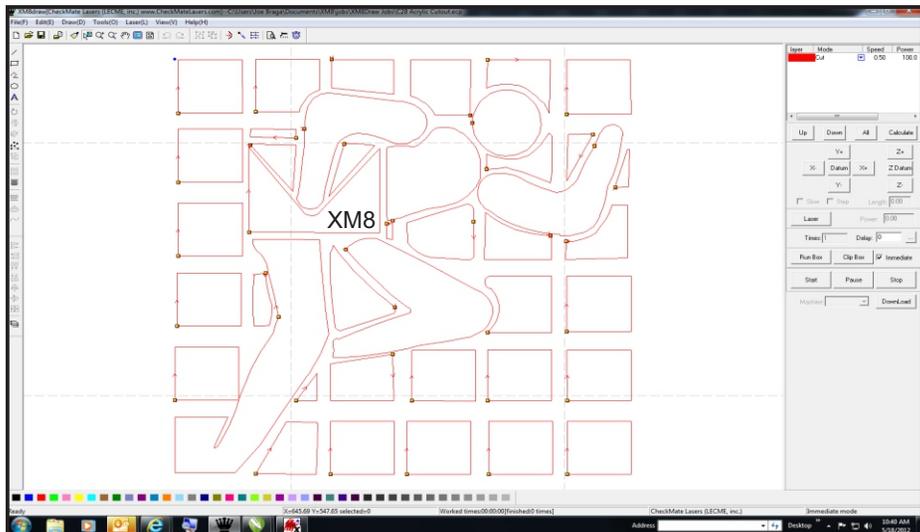
● Perp Laser & Focus

1. **A) Make sure the Laser is ON & Functioning**, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set '**Origin**' usually to the Top/Left corner, but usually to whatever You set the "**Set Knife Origin**" to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Acrylic Cut-Out I

2. **A) Step One:** Draw box with '**Rectangle Tool**' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the '**Text Tool**' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the '**Text Tool**' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-



Projects for XM8Draw

Tool-Kit



Center to Table

Figure 4

layer	Mode	Speed	Power
Cut	<input checked="" type="checkbox"/>	0.50	100.00
Engrave	<input checked="" type="checkbox"/>	65.00	100.00

Figure 2

topics

- Perp Laser & Focus* Sec. 1
- Layout Acrylic Cut-Out I* Sec. 2
- Layout Acrylic Cut-Out II* Sec. 3
- Positioning & Setting* Sec. 4

Project Acrylic Cut-Out

Goal: Vectoring Cutting Acrylics Sheets

● Layout Acrylic Cut-Out II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the '**Size Tool**' on the Tool-Kit and size to what you wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. **Group** the Layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and **Save**.
C) Review: When Vectoring Acrylic the Normal beam on Constantly of the Checkmate is a Big Plus.

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Acrylic Cutout** Usually 55% speed and 100% power, Vector Poer %100 and Speed 20%.
C) Notes: IWhat the Type of Acrylic, If it Vectors (Cut) you did not change your '**Mode**' to '**Engrave**' or Raster. Save the Job with Setting labeled for that material and for the that client for future use.



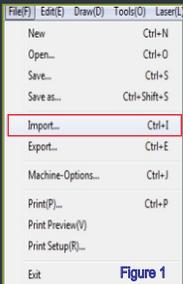


Figure 1

Major Steps to Laser

1. Complete Layout
 2. Set Knife Origin
 3. Set Machine
- Controls
4. Material to laser
 5. Focus & Run

● Perp Laser & Focus

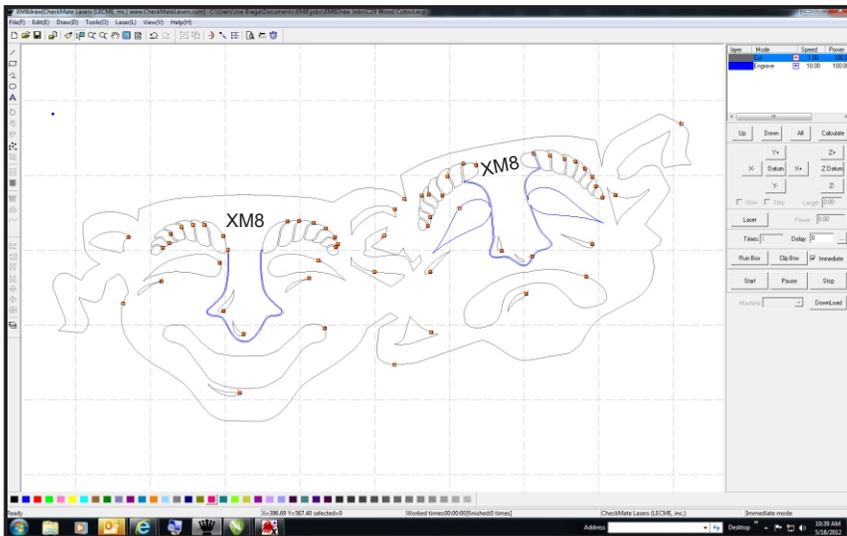
1. **A) Make sure the Laser is ON & Functioning**, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set 'Origin' usually to the Top/Left corner, but usually to whatever You set the **"Set Knife Origin"** to in the Interface.
C) Now 'Perform a FOCUS to the Material', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Wood Cut-Out

2. **A) Step One:** Draw box with 'Rectangle Tool' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the 'Text Tool' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the 'Text Tool' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1

Checkmate Laser XM8Draw Training



XM8Draw - C

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TRAINING VIDEO



For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

Projects for XM8Draw

Tool-Kit



Rectangle

Text

Rotate

Smooth Curve

layer	Mode	Speed	Power
Cut	<input checked="" type="checkbox"/>	1.00	100.0
Engrave	<input checked="" type="checkbox"/>	10.00	100.00

Figure 2

topics

- Perp Laser & Focus* Sec. 1
- Layout Wood Cut-Out I* Sec. 2
- Layout Wood Cut-Out II* Sec. 3
- Positioning & Setting* Sec. 4

Project Wood Cut-Out

Goal: Vectoring Cutting Wood Jobs

● Layout Wood Cut-Out II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the 'Size Tool' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. Group the Layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and Save.
C) Review: Copy and Paste the Text, then Rotate the Text a use the mouse to control the angle rotation of the text itself a easy to learn trick of XM8Draw.

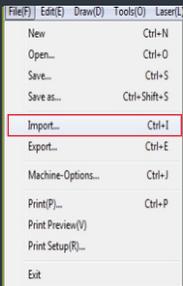
Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Wood Cut-Out**, Usually 50% speed and 100% power, Vector 100% Power and 20% speed on the Cut.
C) Notes: Different woods different power & speed setting **SAVE FOR ALL** materials. If it Vectors (Cut) you did not change your 'Mode' to 'Engrave' or Raster. Save the Job with Setting labeled for that material and for the that client for future use.

Figure 4





Major Steps to Laser

1. Complete Layout
2. Set Knife Origin
3. Set Machine
4. Material to laser
5. Focus & Run

Controls

Checkmate Laser XM8Draw Training



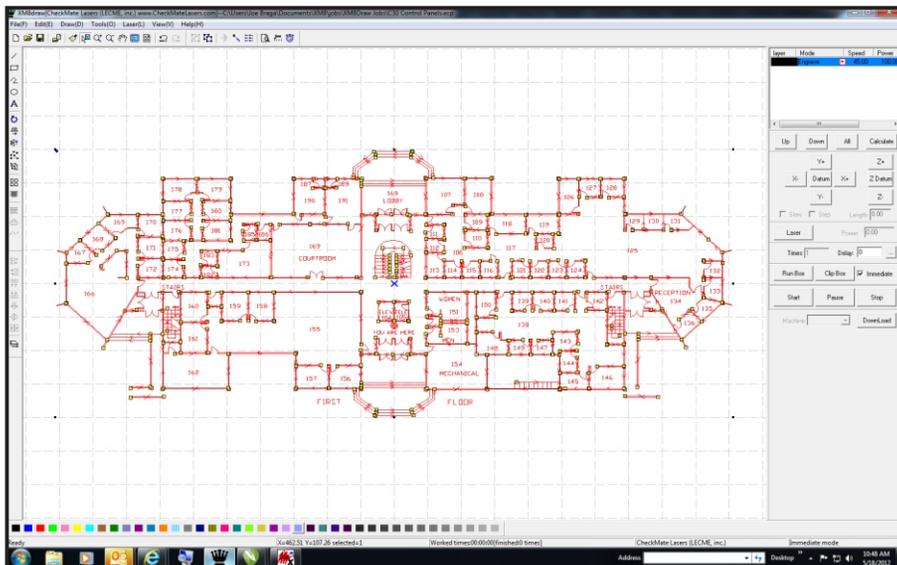
● Perp Laser & Focus

1. **A)** Make sure the Laser is ON & Functioning, shoot a beam to the table to verify you are firing and send a test job over to that PC is talking to Laser.
B) Place the Material into the Laser and set '**Origin**' usually to the Top/Left corner, but usually to whatever You set the "**Set Knife Origin**" to in the Interface.
C) Now '**Perform a FOCUS to the Material**', just raise the table until the two Diode Focus spots merge into one spot on the table material. Remember this is the number one error new operator make, So FOCUS.

● Layout Control Panels I

2. **A) Step One:** Draw box with '**Rectangle Tool**' and size it to Plate Size and pull it into a corner for now.
B) Step Two: Click on the '**Text Tool**' and type out your line of text, repeat this for each line you wish. Also be very should of your spelling.
C) Step Three: While in the '**Text Tool**' dialog you can change your can change your Font to truetype or Single Line, and Control kerning and size. Do not have the Rectangle Selected, if so click 'No'. Once on the Screen select all the Letters and 'Group them by click on the 'Group Icon' on the Standard Bar. Again, Verify that all is typed correctly before moving on.

Figure 1-2 Figure 1-2



XM8Draw - C

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TRAINING VIDEO



Projects for XM8Draw

Tool-Kit



For the Industrial, Signage, Recognition & Marking Industries
X-GRAPHICS

XM8Draw Training

topics

- Perp Laser & Focus **Sec. 1**
- Layout Control Panels I **Sec. 2**
- Layout Control Panels II **Sec. 3**
- Positioning & Setting **Sec. 4**

layer	Mode	Speed	Power
Engrave	<input checked="" type="checkbox"/>	45.00	100.00

Figure 2

Project Control Panels

Goal: Making Control Panels on the Laser

● Layout Control Panels II

3. **A) Step Four:** Now select each Grouped line and Pull the corner to size or click the '**Size Tool**' on the Tool-Kit and size to what your wish.
B) Step Five: Lastly, Position your Lines together into a Layout. Select you sized Plate Rectangle and hit **Ctrl-Y** on the Keyboard. **Group** the Layout as one selection and hit **Ctrl-Y** again. Nudge the layout into place and **Save**.
C) Review: The '**Polyline Tool**' is the secrets to the Kingdom on a making this control Panel. make all your Text it once then pul into place.

Figure 3

● Positioning & Setting

4. **A) Check Position & Focus:** Double Check the Position and that the unit is *Focused*.
B) Power & Speed: Set the Power and Speed for a **Control Panels** Usually 80% speed and 100% power gets it done on covered laser-able plates.
C) Notes: Moast Control Panels are pnels and can vectored as well as rastered but many are per-cut for you. If it Vectors (Cut) you did not change your '**Mode**' to '**Engrave**' or Raster. Save the Job with Setting labeled for that material and for the that client for future use.

Figure 4



\$1000 Free Corel Video Training Package
with Installation Fee

WMB



**\$5000 Desktop 40 watt to
4x3 feet - 120 Watt \$22,000**
Just under

2-Year Factory Warranty
(90-day Tube & Optics)



**Free Additional
Tube
with Purchase**
Changes-out in 15 minutes

*Full Nationwide
Support Team!*

**Marking
Equipment
Priced to Move!**

CheckMate

l a s e r s
& R o u t e r s

**Free Optics Set,
Exhaust Blower,
Safety-Frist Water Chiller,
& Air-Assist Pump!!!**

949-355-4000

PROFESSIONAL MARKING & ENGRAVING SYSTEMS

LECME inc's CheckMate Laser Specifications

Specifications	King	Queen	Rook	Bishop2	Knight	Pawn
Laser Tube wattage available	120/100/80	80/60	60/50	60/50	50	40
Upgradable wattage	Yes	Yes	Yes	Yes	No	No
Table Work Area Size (inches)	47.24x35.43	35.43x23.62	23.62x15.75	23.62x12.6	23.62x12.6	12.6x10.4
Maximum material thickness (inches)	21.62	21.62	9.84	13.78+	3.1	1.97
Laser Engraving Speed (ips)	63	63	63	63	40	20
Communication Interface	USB 2.0	USB 2.0	USB 2.0	USB 2.0	USB 2.0	USB 2.0
Pass through ability	Yes	Yes	Yes	Yes	No	No
Motorized Z Axis	Yes	Yes	Yes	Yes	Yes	No
Red Diode	Yes	Yes	Yes	Yes	Yes	No
Air Assist	Yes	Yes	Yes	Yes	Yes	Yes
Vector cutting ability	Yes	Yes	Yes	Yes	Yes	Yes
Raster engraving ability	Yes	Yes	Yes	Yes	Yes	Yes
Maximum DPI	1000dpi	1000dpi	1000dpi	1000dpi	1000dpi	1000dpi
Rotary Attachment Option	Clamp style = \$695 / Scissor style = \$895				n/a	n/a
Installed table type	Slats	Slats	Slats	Flat	Flat	Flat
Emergency stop panic button	Yes	Yes	Yes	Yes	Yes	Yes
Laser Tube Source (Glass CO2)	Yes	Yes	Yes	Yes	Yes	Yes
Laser Tube Lifespan (estimated)	2 years	2 years	2 years	2 years	1.5 years	1.5 years
2 year Warranty (Laser Machine)	Yes	Yes	Yes	Yes	Yes	Yes
90 day Warranty (Laser Tube & Optics)	Yes	Yes	Yes	Yes	Yes	Yes
Power Source Requirement	220V single-phase 10 amp w/ accessories 20amp					
Gross Power Consumption	1600-2000W	1200w	1200w	1200w	600w	300w
Water Cooling Circulation(C), Pump(P)	C	C	C	C	C	P
Water Cooling Chiller Option	\$695	\$695	\$695	\$695	\$695	\$695
Focal lens options (1.75", 2.0", 2.5", 4")	Yes	Yes	Yes	Yes	No	No

Checkmate Laser Systems



LECME inc's Checkmate Laser Accessories

Each accessory listed below has a warranty provided by its respective manufacturer.

Item	Description	Price
Exhaust Blower	Portable ventilation exhaust blower system	\$ 295.00
Mini-Compressor	Low volume mini tankless air-compressor	\$ 195.00
Optics Package	Replacement Reflective Mirrors & Focal Lens optics package	\$ 350.00
Water Chiller	Change your water pump/circulator to a refrigerated water chiller	\$ 695.00
CoreIDRAW	Industry standard vector graphics editing application suite	\$ 529.00
PhotoGrav	Convert full color digital images to laser ready halftone images	\$ 395.00
PhotoShop	The defacto standard of image manipulation software	\$ 699.00
Cleaning kit	Optics cleaning kit for reflective mirrors and focal lens	\$ 30.00

Images may differ from actual shipping product



Corel Keyboard Overlay



Alt:	Linear	Lens	Exit		Position	Rotate	Scale	Size	Macro Edit	Align/Baseline		
Ctrl:	View Manager			Graphic/Text	Symbol Manager	Envelope	Convert Para. Text	Contour	Text Editing	Insert Sym. Char.	Spell Check	
	<u>Help</u>	<u>Zoom One-Shot</u>	<u>Zoom Out</u>	<u>Zoom to Page</u>	<u>Freehand</u>	<u>Rectangle</u>	<u>Ellipse</u>	<u>Text</u>	<u>Full-Screen Preview</u>	<u>MPU Table Offsets</u>	<u>Fountain Fill</u>	<u>Outline Tool</u>
	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12

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All the Fast Keys for Corel

Alt:	Linear	Lens	Exit		Position	Rotate	Scale	Size	Macro Edit	Align/Baseline		
Ctrl:	View Manager			Graphic/Text	Symbol Manager	Envelope	Convert Para. Text	Contour	Text Editing	Insert Sym. Char.	Spell Check	
	<u>Help</u>	<u>Zoom One-Shot</u>	<u>Zoom Out</u>	<u>Zoom to Page</u>	<u>Freehand</u>	<u>Rectangle</u>	<u>Ellipse</u>	<u>Text</u>	<u>Full-Screen Preview</u>	<u>MPU Table Offsets</u>	<u>Fountain Fill</u>	<u>Outline Tool</u>
	F1	F2	F3	F4	F5	F6	F7	F8	F9	F10	F11	F12

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