Epilog Zing 24 Laser

General Use Tutorial

This tutorial will guide you through the basic use of this equipment in Jumbo’s Maker Studio.

**IMPORTANT NOTE**

If you have any questions about the instructions or suggestions, please add a comment and the staff will update the tutorials. Your comments will help future users make better use of the equipment in Jumbo’s Maker Studio.

**SAFETY WARNINGS**

Only use approved material listed in [**Epilog Zing - Speed/Power Settings**](https://docs.google.com/document/d/1MIof4vURkQe0OULoFUn2YCci3aNcVYhajHLVeI5jCK4/edit?usp=sharing)

|  |  |
| --- | --- |
| ***Before***setting up the *Epilog Zing 24 Laser cutter*, please make sure your file is set up properly for etching and cutting.  Follow the instructions in the document below:  [**Epilog Zing - Doc Setup**](https://drive.google.com/open?id=1AT2eOS02x0hVRZxfrSKVOGZKGYvcNNEyzQNgNfDfLXY&authuser=0) | C:\Users\Nathan\Desktop\zing16-model.jpg |
| 1) Open the top door of the laser cutter. | challenge-5-zing.jpg |
| 2) Select your material  ***Do not use PVC, Vinyl or Heavy Metal*.**  If you are unsure if your selected material is approved for cutting or engraving, check the list of **Common** or **User Submitted** materials in the document below:  [**Epilog Zing - Speed/Power Settings**](https://drive.google.com/open?id=1MIof4vURkQe0OULoFUn2YCci3aNcVYhajHLVeI5jCK4&authuser=0)  **Note:** If you would like to add a material to the approved list, please contact a member of the Maker Studio staff. | materials.png  C:\Users\Nathan\Desktop\Materials.jpg |
| 3) Place your selected material in the top-left corner of the laser cutter tray. Make sure it is tight against the rulers. | IMG_1462.JPG |
| 4. Turn on the laser cutter by pushing the switch located on the right side of the machine.  Wait for the laser cutter to stop moving before continuing onto **Step 5**. | power.png |
| 5) Prepare the **Focus Gauge** by pushing the **Focus** button on the **Control Pad**. | focus.png |
| 6) Locate the **Focus Gauge** on the horizontal beam. Release the **Focus Gauge** from its hook so that it hangs freely (not touching your material).  **Note:** If the **Focus Gauge** is touching your material, lower the tray height by repeatedly pressing the **Down** **Arrow** on the **Control Pad** until the **Focus Gauge** hangs freely. | IMG_1468.JPG  **Note:**  down.png |
| 7) Adjust the tray height:   1. Press the **Up and Down Arrows** on the control pad until your material touches the **Focus Gauge**. If thespring on the **Gauge** is bent at all, the tray is too high, and you must lower it. 2. Lightly flick the **Focus Gauge**. If it swings freely without touching your material, repeat **Step 7a**.   If after flicking the **Gauge**, it swings and briefly and then stops by touching your material, you are at the correct height. 3. Replace the **Gauge** onto the hook, and press the **Reset** button on the control pad. | upanddown.pngIMG_1496.JPG  reset.png |
| 8) If it is not already on, start the computer and log in to **ceeostud2**. | IMG_1504.JPG |
| 9) If the computer is not already running in Windows 7 on the virtual machine, select the **VMware Fusion** application in the dock. | Sc1.png |
| 10) If you are importing a file from a flash drive, plug it into the USB hub. When the message show to the right appears, click “**Connect to Windows**.”  If the message does not appear, hold the mouse at the top of the sceen in VMWare to bring up the menu. Select “Virtual Machine” -> “USB & Bluetooth” and connect your flash drive. | Screen Shot 2015-01-07 at 1.43.16 PM.png |
| 11) Run **Adobe Illustrator** in the virtual windows 7 machine. | Sc2.png |
| 12) Open your file by clicking **File > Open**.  If you haven’t already done so, **make sure your file is properly set up for cutting and/or engraving** by following the document below:  [**Epilog Zing - Doc Setup**](https://drive.google.com/open?id=1AT2eOS02x0hVRZxfrSKVOGZKGYvcNNEyzQNgNfDfLXY&authuser=0) | Screen Shot 2015-01-07 at 2.20.50 PM.png |
| 13) Click **File > Print**.  When the Print window appears, make sure ***Epilog Engraver WinX64 Zing*** is selected in the **Printer** selection box.  Then, click **Setup** at the bottom-left of the Print window. | Screen Shot 2015-01-07 at 2.21.46 PM.png  Screen Shot 2015-01-07 at 2.31.41 PM.png  Sc3.png |
| 14) In the new Print window, make sure **Epilog Engraver WinXZing** is selected, then click **Preferences**. | Sc4.png |
| 15) When the **Epilog Printing Preferences** window appears, choose the job type you require:   1. Choose the **Raster** job type if you only want to **engrave** your material 2. Choose the **Vector** job type if you only want to **cut** your material 3. Choose the **Combined** job type if you require both **engraving AND** **cutting** | jobType.png |
| 16) Refer again to the **Speed/Power Settings** by following the link below:  [**Epilog Zing - Speed/Power Settings**](https://drive.google.com/open?id=1MIof4vURkQe0OULoFUn2YCci3aNcVYhajHLVeI5jCK4&authuser=0)  Find your material under either the **Common** or **User Submitted Settings**. | materials.png |
| 17) If you will be **Engraving** (or performing a combined job), find and record the **Speed** and **Power**  (Speed#/Power#) under your desired raster resolution, as indicated by the **DPI** value  (e.g. 500 DPI). | engra.png |
| 18) If you will be **Cutting** (or performing a combined job), find and record the **Speed**, **Power**, and **Frequency** (Speed#/Power#/ Frequency#/Passes#) under your your material’s thickness. | vector.png |
| 19)Return to the **Epilog Printing Preferences** window.  If you have chosen either the **Raster** or **Combined** job type, select your desired **Resolution**. This should be the same value as the one used to determine your engraving speed and power settings. | resolution.png |
| 20) If you have chosen either the **Raster** or **Combined** job type, set the **Speed** and **Power** values to match those you recorded in **Step 17**. | raster.png |
| 21) If you have chosen either the **Vector** or **Combined** job type, set the **Speed**, **Power**, and **Frequency** values to match those you recorded in **Step 18**. | vectorval.png |
| 22) Set the **Horizontal** and **Vertical** **Piece Size (inches)** to the corresponding dimensions of your file. If you are unsure of your file’s dimensions you must return to **Adobe Illustrator** and...  **Note:** The dimensions of your file **Must Not** exceed **24** inches horizontally x **12** inches vertically.  When you are done, click **OK** to finish the print settings. | size.png |
| 23) Click **Print** in the **Print** window. | print.png |
| 24) Before you start printing, you must make sure your image will be in the correct position.  In the example to the right, there is not enough room in the upper-left corner of the workpiece to fit the current project. There is room, however, in the lower-right corner.  If you encounter this problem, measure the **X** (horizontal) and **Y** (vertical)position of the upper-left corner of your available space. Use the rulers on laser’s tray to guide you. | position.png  **Example:**  New Upper-Left Location (X,Y) = (4.25”, 2.25”) will not interfere with any of the pre-existing cuts on the material. |
| 25) In the **Adobe Illustrator** **Print** window, adjust the **Placement**.  If you needed a new upper-left position, as mentioned in **Step 24**, type the new **X** and **Y** positions you just measured.  If you did not need to find a new **X** and **Y** position, type in **0.1 in** **for Both X and Y**. | pos.png |
| 26) Click **Print**. | print.png |
| 27) Close the lid of the laser cutter. | C:\Users\Nathan\Desktop\zing16-model.jpg |
| 28) Ensure that the **Control Pad** of the laser cutter displays the name of your file. (You may need to press **Job** to return to the job menu) If so, you are ready begin. Just press **Go**. | go.png |
| #) After the job has completed, wait about 30 seconds for the exhaust to clear from inside the chamber before opening the top door to retrieve your finished piece.  **WARNING:** If you have cut pieces, do not move your work piece yet. Tap a few of the pieces without lifting the whole piece. If it has cut all the way through they should move a little. |  |
| #) If your workpiece contained cut segments, look to see if they were cut all the way through the material. If not, ……………... |  |

Have some information about how to shut down the machine and clean up - particularly small pieces that fall through the vector grid.