



Objectives:

- Working with a file from an outside source
- Removing parts of a file that are unnecessary
- Placing images in Illustrator
- Also all the objectives from the keychain project

Accompanying Documents/Links:

<https://www.epiloglaser.com/resources/sample-club/music-box-laser-cut.htm>

Materials Required:

¼ inch plywood

Laser Cutter Resources – Beginner Projects – Trinket Box

Preparing the Files:

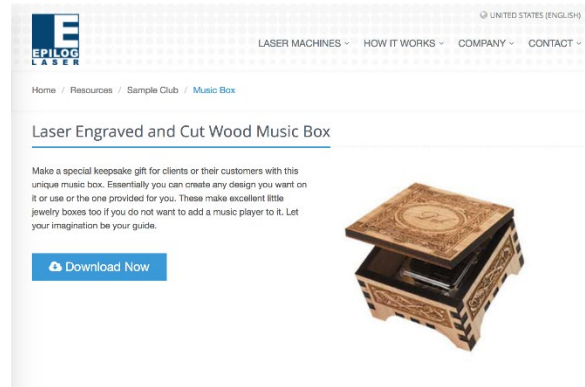
To start off we need to download the file from Epilog laser.

Note: the music box file is designed for 1/4" wood.

Here is the link to the file:

<https://www.epiloglaser.com/resources/sample-club/music-box-laser-cut.htm>

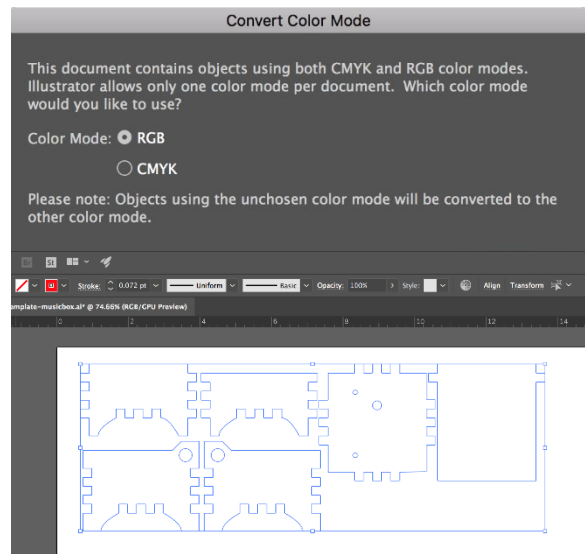
Click the blue 'Download Now' button to begin.



Launch the Adobe Illustrator program and create a new document to the proper size for the LC, in this case 32" by 18". This will be the file you'll design in.

Next, open up the music box file, 'musicbox8.cdr' using File/Open. Because CDR files are compatible with Illustrator, you'll be able to open up the file, but such files are not compatible with the laser cutter software.

Note: If you receive a pop-up that asks for the Color Mode, make sure to select RGB. The laser cutter is formatted to operate with RGB, so CYMK will NOT work properly.

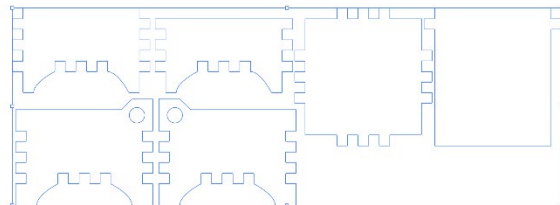


Select the entire design of the music box files, then copy and paste into the first document you made for the LC.

Select the entire design again, then right click and select the 'Ungroup' function. The file has all the parts connected for easily moving the entire design around as is, but we'd like to personalize the box.

After ungrouping, we can remove the images from the sides of the box, and the holes on the bottom of the box (but not the ones on the sides) as well. The holes on the bottom were designed to accommodate music box hardware, but the holes on the sides allow the lid to swing.

Once you have the original images removed, make sure that your stroke for the cut lines is 0.001 inches (or 0.072 pt), and that they are of uniform RGB color.



For this example, our cut (vector) lines are set to be RGB red.

Laser Cutter Resources – Beginner Projects – Trinket Box

Personalize your Trinket Box:

Time to make the trinket box your own, add whatever image you would like to etch onto the lid.

Feel free to add additional images as you wish on other parts of the box! Keep in mind that it just has to fit and that the more images you place, the longer it takes to etch. We decided that a cat on the lid would be our only graphic.

Getting Ready for the Laser Cutter:

Now this part of the project requires a little bit of planning. Here at BeAM we try to conserve as much material as possible, so we're cutting this out of scraps. Unless we get lucky with an only slightly used scrap board, it's best if we do this one piece of the box at a time.

Start by clicking on one of the box components in Illustrator.

Next, click the 'Transform' button – which will tell us the size of that specific box component.

Since we're doing this piece by piece, select this component, then copy and paste it into a new Illustrator document.

Check the scrap bins for pieces you can use!

Note: Remember that the trinket box is designed for 1/4" wood.

Determine where to put the box parts on the scrap; you need to make sure that the scrap is large enough to fit a given portion of the box.

For example, the lid is approximately 3.25" x 3.25", so we must make sure the scrap is of appropriate dimensions.

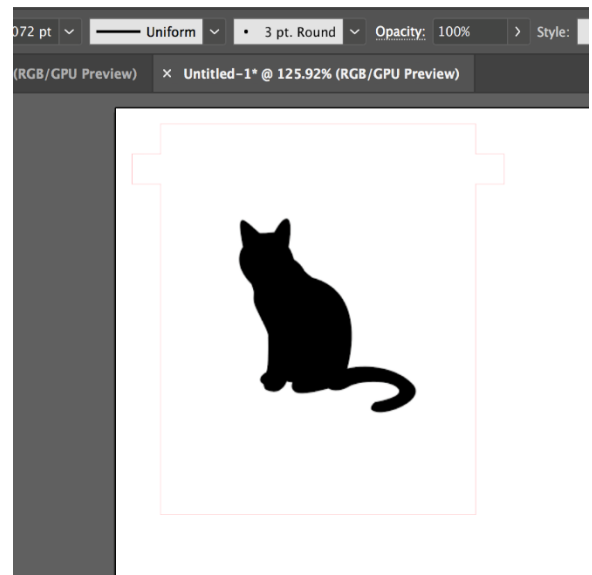
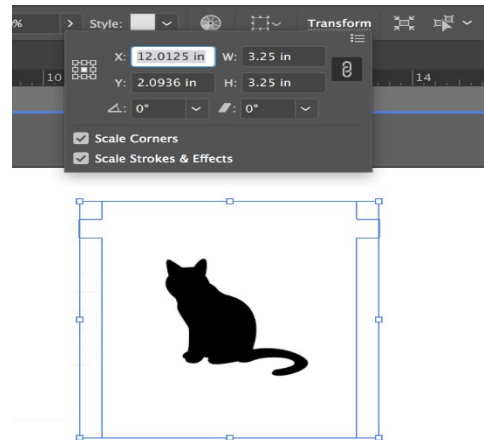
When you paste the component into a new document, make sure that the design is placed in the same spot on the software that you'd like it to cut on the laser bed. In this case the upper left corner was open and fit our design.

If there are more parts that'll fit on your scrap, add them to your current document.

Once you have everything set, save your document and label them so you know which scraps go with each file.

Repeat all previous steps of "Getting Ready for the Laser Cutter" until you have each component ready.

Save your files onto a flash drive to prepare for laser cutting.



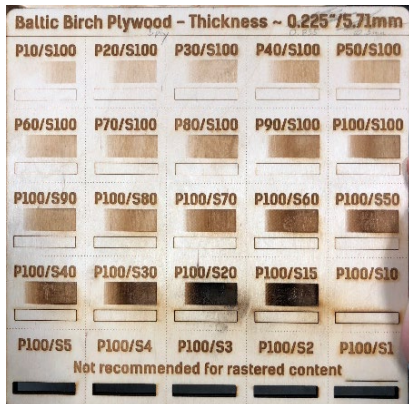
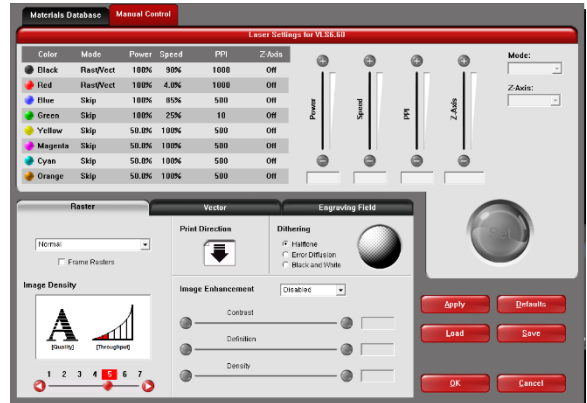
Laser Cutter Resources – Beginner Projects – Trinket Box

Note: Another method is to keep all the components in the same file, and just turn options on and off for each piece/cut.

Cutting Using the Laser Cutter

Once you load the file onto Illustrator, navigate to the Manual Settings.

Note: We’re rastering a single image in black in our example, so we want that to be done first so that the material doesn’t get shifted after cutting through.



Refer to the Power/Speed board for the settings that match your needs.

Choose appropriate power-speed settings for the colors you’ve chosen for the keychain.

Put them here if you’d like:

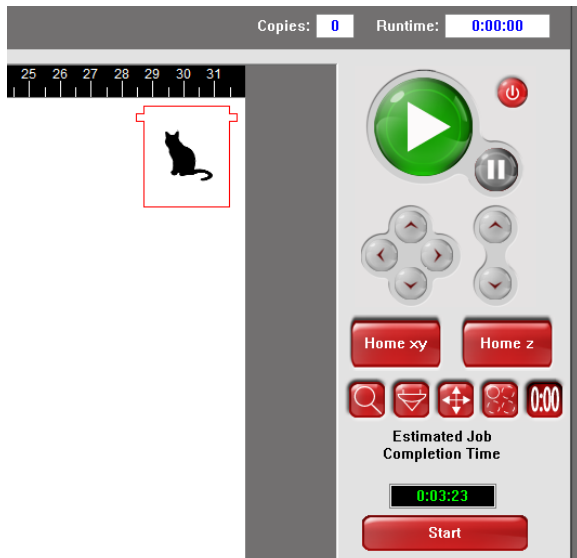
Red: _____ Green: _____

Blue: _____ Cyan: _____

Magenta: _____ Black: _____

Yellow: _____ Orange: _____

Don’t forget to hit “Set” after inputting the values for each color!



It’s time to cut out your box! Load in each piece of scrap, then run each cut! It would be good to utilize “Focus View” to make sure your cut is on the right area of your scrap.

Don’t forget to stay with the laser cutter for the duration of your cut.

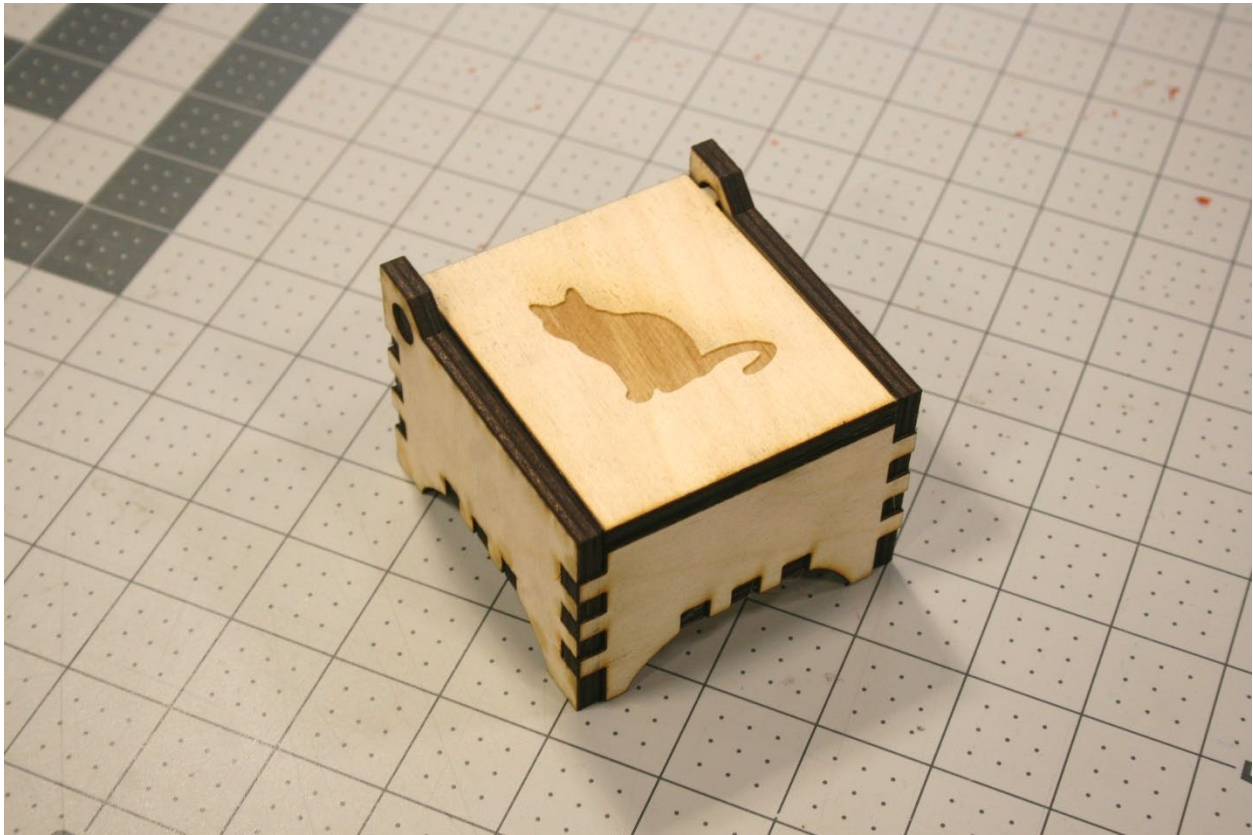
Laser Cutter Resources – Beginner Projects – Trinket Box



Use the clamps and wood glue to assemble the pieces

Note: The front piece and back piece are nearly identical, except that the back piece is shorter to allow the lid

to swing around. If you assemble those backwards, your lid will not open, so test this once your piece is clamped.



Enjoy your finished box!