



Kern: Basic Operation

This serves as an intro to cutting and engraving on the Kern.

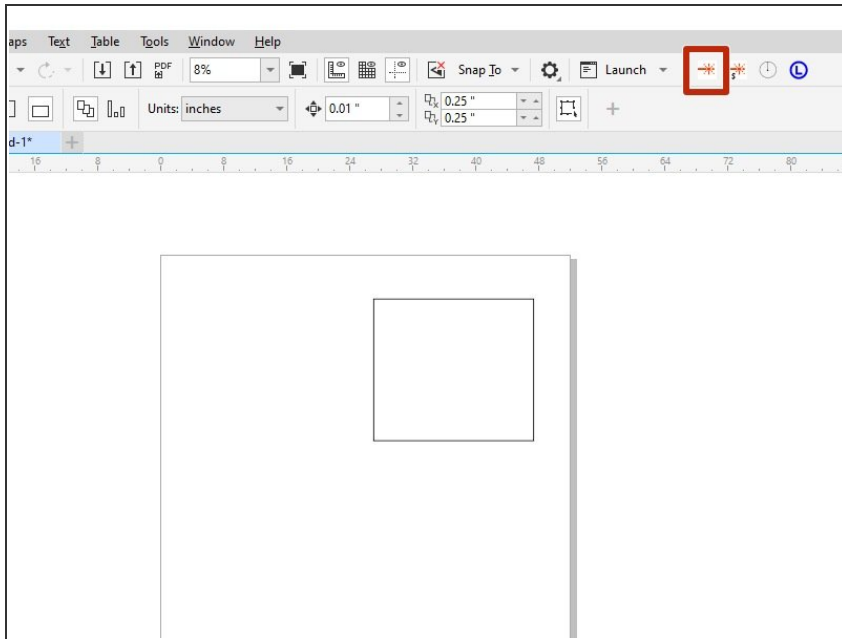
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Introduction

This guide is the first one that shows how to cut on the Kern. It shows how to cut nonmetals. The next guide will cover how to cut metals.

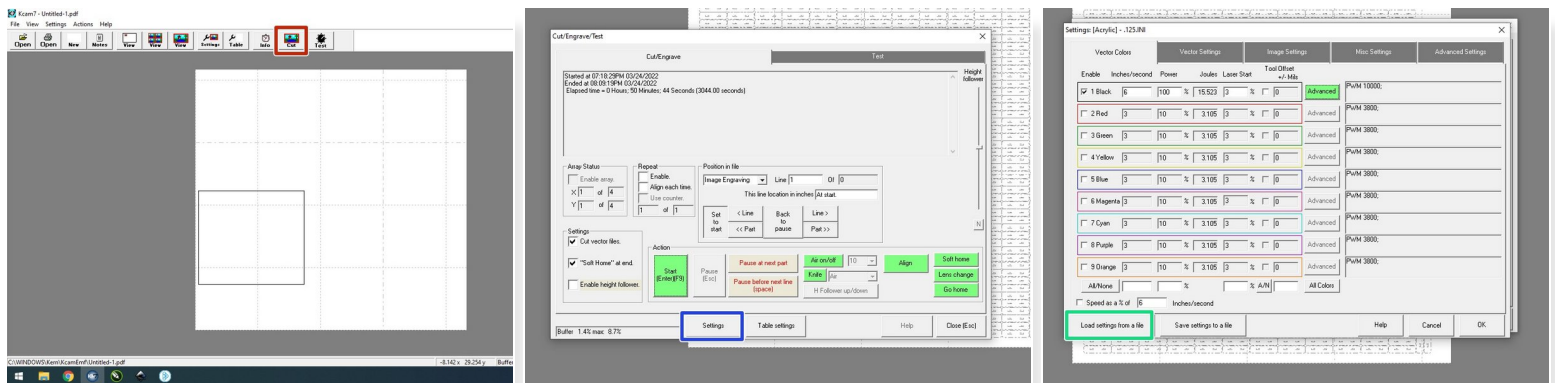
Step 1 — Sending Files to Kcam



- To send the file to Kcam from CorelDraw, deselect all lines, then click the highlighted button to transfer the file to Kcam

i If you want to only export certain lines, you can select only those lines, then click the red button

Step 2 — Loading Material Specific Settings



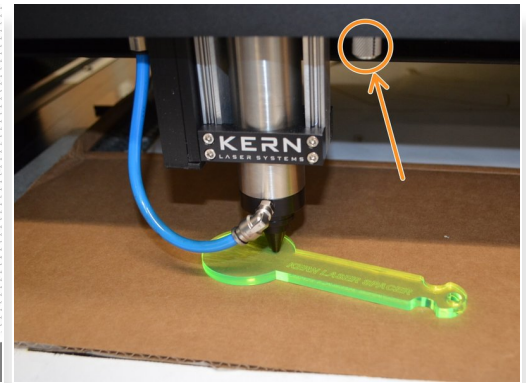
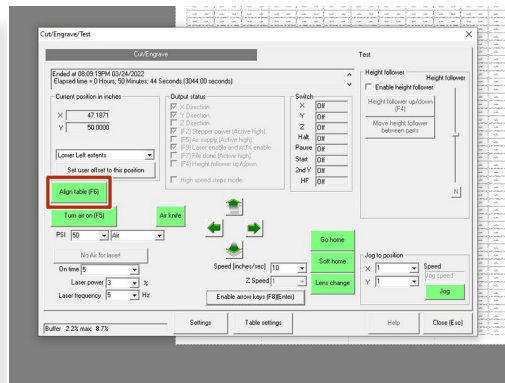
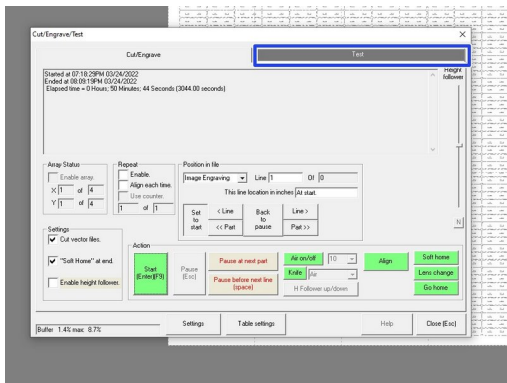
- Click the **CUT** button to launch the status menu
- ⚠ **Never click the TABLE button**
- Click **SETTINGS** to launch the settings menu
- Click **LOAD SETTINGS** to choose the correct settings for the proper material and thickness and then click **OK**

Step 3 — Nametag Training: Settings



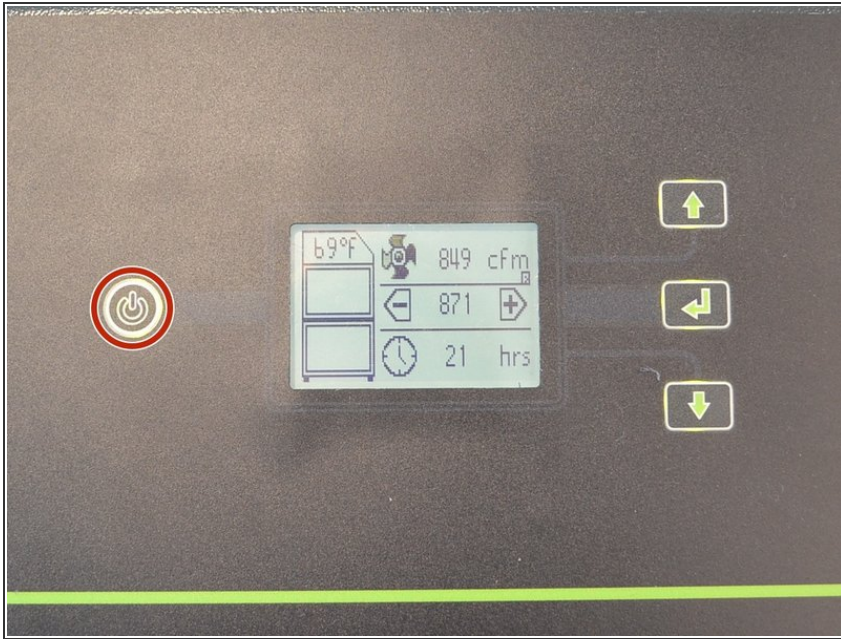
- For the nametag training part, recall that we set the outline to be a black hairline and the shell to be a red hairline. We can now assign different settings to those colors
 - Click "load settings from a file", then open the "plywood vector engrave" settings. Make a note of the power, speed, and % laser start settings
 - Next, open the .125" plywood settings. There are settings in the black area for cutting through the material, but no other settings are checked
 - Click the box next to the red settings, then enter the correct values for the power, speed, and % laser start. Click ok
-  You should now see both the outline and the shell as dotted lines on the preview

Step 4 — Material Preparation



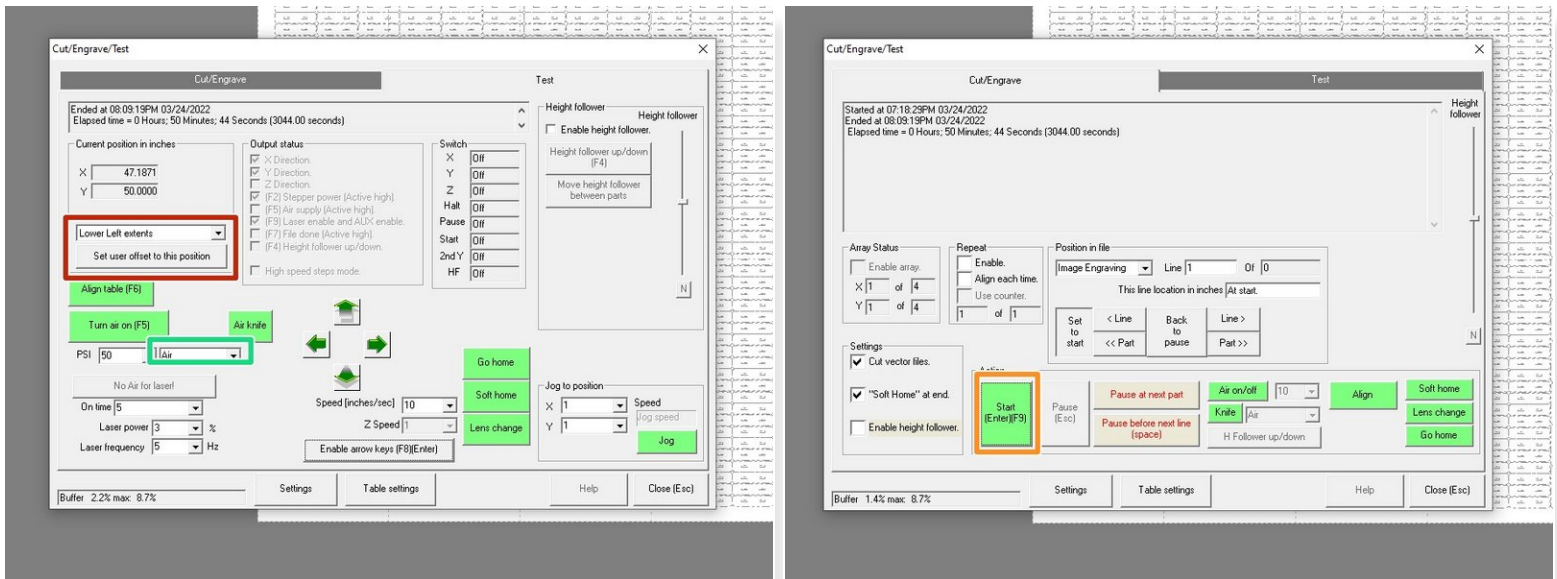
- To move the head click **Test**
- Align the head to its home position by clicking **ALIGN TABLE**
 - ① This is only needed if the coordinates say "invalid"
- Turn the height adjustment knob until the head is at the highest position
- Drive the head above the work piece using the arrow keys on the keyboard
- Set the height of the head to the work piece using the spacer
 - Turn the knob until the head barely touches the surface of the spacer

Step 5 — Machine Preparation



- Check that the proper head and nozzle are being used for the material and type of cut
- Turn on the BOFA using the power button, and chiller by turning the switch to the right
- Ensure it is running at about 1000 cfm (press the enter button to change the units)
- If not, hold the enter button until the LEDs start flashing, hold the up arrow to increase the flow, then hold the enter button again until the arrows stop flashing

Step 6 — Begin Cutting



- Align the head to the lower left corner of the work piece.
 - Click **SET USER OFFSET TO THIS POSITION** to set the lower left extents
 - Ensure the assist gas is set to air
 - Return to the **Cut/Engrave** menu
 - Click **START** to initiate the cut
 - The head will move to the location of the first cut. Check that the head is in the correct location and click **START** again to begin.
- ⚠ If engraving, the head may move off of the work piece due to the ramp offset. You may need to move away from (0,0)
- ⚠ Make sure to watch your initial cuts for any irregularities

Step 7 — Next Steps and Sign-Off



- You now know how to cut things on the Kern so feel free to start cutting nonmetals
- Feel free to ask any questions or post in the #equip-kern slack channel
- The next guide is metal cutting