Artsoft Helpdesk

Mach4 Counts Per Unit and Wizard

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In order to set the counts per unit, velocity, and acceleration for each axis you must select your axis by clicking the text on the right-hand side of the Motors tab. In Mach4, navigate to Configure>Mach>Motors. There, you will see a list of your Motors on the right: Motor0, Motor1, Motor2, etc. Use the check-box to select each motor you need active. Then, click on the motor for the first axis you want to set up. For example, if you want to set up the axis controlled by Motor0, you click on that motor. This will allow you to enter the counts per unit, velocity, and acceleration. Once you've set your values, be sure to click 'Apply' to save those changes. Select the next motor from the list to continue setting your values for the rest of your axes.

You'll also find a Steps Per Unit Calculator in the Wizards. Simply navigate to Wizard>Select Wizard and choose the calculator from the list. Enter in your current Steps Per Unit (found in the Mach>Configure>Motors tab) for one of your axes, the distance you'd like to move that axis, and the speed you want it to move. Jog your machine to a safe position that allows that axis to move that distance in a positive direction, then click "Incremental Move". Mach4 will move the selected axis that distance. Measure how far it actually moved (grab a ruler, calipers, whatever you use to measure things) and enter that value in the Actual Distance box. Click "Recalculate" and Mach4 will do the math and recommend a new steps per unit setting for you. Go to the Motors tab and change your Steps Per Unit (make note of the original value, in case you want to start over). Keeping calibrating with the same axis, moving it a larger increment. Make sure you are positioning your machine so that these are safe moves each time. You'll want to move larger increments until your axis can travel the full distance of your table accurately. Do this with each axis until you are satisfied with the accuracy of your machine.

Tutorial: https://youtu.be/d-xCWDR0Uvg