Artsoft Helpdesk

Setting up Mach4 for rotary (4th) axis.

Imported User 6 - 2019-04-29 - in Mach4

Mach4 Rotational Axis (non lathe)

1. Users will choose an Axis that wish to use for Rotational use. A, B, or C.

2. Lick on “configure”, “general”. The lower right field is “Rotary Axes”. If the user would like the DRO (Digital readout) associated with the axis to return to “0” from “359” degrees, simply check to corresponding Axis box. **(if not checked, the DRO will not be 0-359 degrees. From 0, it will either be a positive or a negative value)

3. Next click on the “Axis Mapping” Tab. Enable the Axis that is slated for rotational use, and also the motor number designated for it. (this will be needed for the next step)

4. Assume Motor A is used. Click on the motors tab. Look for the motor number for “A” in the list of motors on the right column, and check the box adjacent to Motor 3. Next, Users will have to set the Steps Per Unit, Velocity, Acceleration, Ect. Below is a link to “Setting Steps Per Unit Calculator” from our Knowledge Base.

http://support.machsupport.com/staff/index.php?/Knowledgebase/ViewKnowledgebase/Article/61/0

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(Before Moving on, exit out of Mach4 and then re-enter. This Ensures Motor Setting have taken place)

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5.Once the axis is configured The axis can be added to the homing list in the “Homing/SoftLimits” Tab.

6. The net few steps will set up the DRO for Axis “A”. Disable Mach4. Click on the “Operator” drop down menu at the top. (its next to “Help”) Choose the “Edit Screen” option.

7. Click on the Dro fro “A” axis. Down in the lower left of the screen the properties of anything that is clicked on in the screen. So the properties of “A” should be shown now, if not just click on the “A” DRO at this time.

8. Look for the “DRO Code Box”. (should be tenth from the top) Click on the empty box

to the right of the DRO Code. A list of choices should show up. Choose “A Multiple Position” for the code. Then Click on “Operator” again, and click on Edit Screen. This will toggle out of Edit Screen and will ask to save the changes. **(note!!!! there are other options users can choose for the DRO Code, but Multiple will reflect the current state of the machine, and will change with the X, Y, and Z DRO's, for Work, Machine, and Distance to go.)

9. The last few step will cover setting up General jogging buttons on the “Keyboard Plugin”. Click On the Configure Drop Down Menu, hover over Plugins, and then slide over the “Keyboard Inputs” option.

10. Scroll down to the end of the list. (should be ZminusInc). Click the “Add” button twice. This will set two new fields. The input name will be determined by the user. Click on the input name field and name it. In this example we will create “Aplusjog”, and “Aminusjog”. After the inputs are named, click on the “Key” field next to Aplusjog. The box should turn red and should also say select. Pick and hit a key on the keyboard for this function, and it will be assigned as such. Users can also select an accompany button for the function. For instance, Assume “Z” button is used for Aplusjog, Shift, Alt, or Ctrl would want to be used so the Axis won't rotate if “Z” is used in typing/editing code, as it very often. Users can also choose a lock button as well. (this will act as a toggle for the function). The last field is “Function” Users will choose the function for the Button. Click on the field box and choose the function desired for the button from the list.

11. Once the buttons are set up click on “OK”. At this time, exit Mach4 to make sure the button setting are applied correctly, re-enter Mach. Once Mach is open click on the “Jogging” tab, then on “Keyboard Inputs Enable” button. (this will allow jogging functions from the keyboard). Enable Mach, if not already enabled, then click on the “A+”, and “A-” buttons on the screen with the mouse pointer to check axis movement. Then use the keyboard buttons that were set up in section 10.

End Note

This procedure was written for a general set up for a Rotational Axis. There may be more, or other variables involved, depending on the usage and or type of machine the individual user has. Users are responsible for reading The set up manuals for Mach4. Also they will need to have the associated motors wired and integrated correctly before they have any success setting up features like the one discussed in this article.