QUICK START-UP CNC ROUTER WITH NC STUDIO V. 4.44-B

By: AUTOMATION MAKER LTD.





START UP- INSTALL NCSTUDIO & INSERT CARD



- 1. First install the program **NcStudio**.
- 2. Insert the card and find its driver in the NcStudio folder.

START UP- SET IO State

📩 NcStudio AD. Engravin	g Machine Co	ontrol System -	[no file]			E	
File Edit View Operation N	<u>1</u> achine <u>W</u> indo	w <u>H</u> elp					-2
] ≌ ℝ □ ℝ ⁽⁰⁾ (o		II II I⊳ ∥	X Y Z	2			
BKREF ESTOP IM	T ALARM						
NC State							
				.			
AX M. COOR. W. COOR.	Remaine -r	eedrate(mmvmin)	Cattian 2200	Spindle rev:	Setting: 15	i000	na Set:
X. 115.147 0.000	0.000	+	Setting: 2200	Landara.	Actual: 4	G54	
Y: 2/1./31 0.000	0.000	0	120% Actuar. 0	6000 15000 240	100 ACIUAL 15	000	
Z: 203.863 0.000	0.000 C	urrent Line(E	100%	Spindle: ON	1 1	JU%	
Trace Log Mi	anager Par	ams Editor	IOState AU	MA			
Tag	Pin Po	larity No.		125			
Calibration	J1-01 N	0	P	anel		C dog	
Simulate Port	J1-06 P	1		¥+	7+		
Toggle Polarity	J1-07 P	² 2		(8)	(9)	C 0.01mm	
O Spit List View	J1-12 N					C 0.05mm	
O Spir • Report View	J1-13 N	1		1	The second secon	N. D.DOMINI	
O Spir	J1-05 N	2		X- (4)	X+ (6)	C 0.1mm	
	1		🕱 NcStudio AD. Engraving Mac	hine Control System - [no file]	8		
			File Edit View Operation Machine	Window Help			
			JOG IDLE	4			
			A> M. Coor, W. Coor, Rem X: 115.147 0.000 0.	odrate(mm/min)	Spindle rev.	Current Command Set: 15000 G54	
			Y: 271.731 0.000 0. Z: 203.863 0.000 0.	000 0 1200 Actual: 0	6000 15000 24000 Actual:	15000	
			Trace Log Manager	Parama Editor IOState	Spindle: ON AUTO 1	MA	
			Tag Pin Calibration 31-0	Polarity No.	-JOG	@ 10g	
			Z Limit J1-0 Y Limit J1-0 X Limit J1-0	16 N 1 17 N 2 18 N 3		Y+ Z+ (8) (9) ⊂ 0.01mm	
Toggle the polarity of a port. Nee	d to restart the	application	O Spindle Low Rev 31 O Spindle Medial Rev 31 O Spindle High Rev 31	12 N 0 13 N 1 15 N 2	X-	C 0.05mm	UM
100					(4)	(6) C 0.1mm C 0.5mm	
					Z- (1)	Y- (2) C 1mm	
					Tip: Press T	URBO(or CTRL) key to jog	
					more ra	pidly	
			Pearty			2000.12.05 15.49.20 NUM	

1. When start up, if the polarity of X,Y, Z limit are P, we must change to N by click **Ctrl + Shift + Alt + Right Mouse button.**

- 2. Change the all the Toggle Polarity for X,Y, Z limit
- 3. Close the program and Restart the program again. The warning sign should be off
- 4. Once it restarted the program, it should not be any Alarm.

START UP- SET PARAMETERS

Trace Log	Manager P	arams	ditor IOState					
	Manual Feedrate							
Machining	Normal Jog	1000	mm/min					
	Rapid Jog	2000	mm/min					
Manufactory	Auto Mode Parameters -							
	G00 Feedrate:	2200	mm/min					
	Machining	1500	mm/min					
	 "Enable the default feedrate, and ignore the feedrate declared in the file." "Enable the default spindle rpm, and ignore the rm declared in the file., and ignore the rm declared in the file." "Enable the self-adaption optimization algorithm for the feedrate, which will give better performance of machining effection." "UK Increment Mode, which means UK values at a circle G code are incremental values from the center of the circle." "Enable Z-down feedrate, also called the Tool-droping feedrate." "Optimize the Tool-raising feedrate, i.e. Using G00 feedrate at a tool-raising code." G00 code is alway with 100% feedrate. Auto stop spindle on pause or stop (Need to re-startup). Mirror Axis "A flare a machinism took and a mouse to the following a sociation automptically." 							

- 1. Now click on the Params
- 2. Normal Jog and Rapid Jog can be adjust with this number.
- 3. If IJK are needed, this button should be unclick
- 4. Now click on Manufactory. The password is "**ncstudio**".

START	UP-SET PARAMETERS
	Password
<u>M</u> achining M <u>a</u> nufactory	Workbench Please input the password to open the Manufactory Parameter Window: "Set the workbench dimensions, wirraises an out-of-limit alarm after the become effective." Please enter a Start (Mechanical) Coor.
	Y: 0 mm Z: -80 mm Note: Please restart after changing above
2	Mobile Calibrato: Thickness of the 10 mm Motor Parameter Irate of z axis:
Normally, motor parameter is either 0.003125 or 0.00625 depending on	X: 0.00625 mm/pulse Start-up Feedrate: Y: 0.00625 mm/pulse He maxium feedrate of z axis:
machine models.	Z: 0.00625 mm/pulse 1500 mm/min
	Set the angle-per-pulse while Y axis is a revolving axis: Linear Acceleration: 400 mm/sec 2
	Connection Acceleration: 1000 mm/sec 2

1. Once again, password is "ncstudio"

2. Normally, motor parameter for X, Y, Z is either 0.003125 or 0.00625 depending on machine models. We recommend you to start with 0.00625. Then test the axis for example try to move Y 100mm, if it's not right then change to .003125

START UP- TEST RUN



- 1. Test X,Y, Z to see if they work property or not. You can use ruler or vernier caliper to test if the machine run according to the control. If not, then readjust Manufactory Parameter.
- 2. Ctrl + Enter for Full Screen. Repeat will return back to the normal screen

START UP- ADVICE!



- 1. Always **reduce speed** to a very low before start the Auto Play. Then when everything is okay increase the speed to be normal.
- 2. Simulation = F8, Start = F9, Pause = F10, Stop = F11

For more detail please see CNC Router Manual V4.4