Use z -axis as an example:

A. setup parallel port address:

(you also should read and setup parallel type, address in BIOS in computer)

In your computer you should try different type of parallel to make the computer works with CNC board,

In my Dell computer, we use "EPP", NOT "ECP" or other default types. But different BIOS software may have different type of parallel that works with CNC driver board.

Engine configuration (ports & pins)

- 1. Here 0x378 should as same as the address in your computer
- 2. setup kernel speed at 25000hz

Engine Configuration Ports & Pins					
Port Setup and Axis Selection Motor Outputs Input Signals Outputs   Port #1 Port Enabled Port #2 Port Enabled   Dx378 Port Address Entry in Hex 0.9 A.F only Port Setup as inputs   Entry in Hex 0.9 A.F only Pins 2.9 as inputs   Kernel Speed 35000Hz 45000Hz 60000hz   65000hz 75000hz 100khz   Note: Software must be restarted and motors retuned if kernel speed is changed.	Ut Signals Encoder/MPG's Spindle Setup Mill Options OR MaxNC Mode Max CL Mode enabled Max NC-10 Wave Drive Program restart necessary Restart if changed Sherline 1/2 Pulse mode. ModBus InputOutput Support ModBus PlugIn Supported. TCP Modbus support Event Driven Serial Control Servo Serial Link Feedback				
	OK Cancel Apply				

B. Setup z-axis, step in 6 pin, dir in 7 pins, based on our manual for CNC driver board.

En	Engine Configuration Ports & Pins							×	
P	Port Setup and Axis Selection Motor Outputs Input Signals Output Signals Encoder/MPG's Spindle Setup Mill Options								
	Signal	Enabled	Step Pin#	Dir Pin#	Dir LowAc	Step Low	Step Port	Dir Port	ור
	X Axis	X	2	6	X	X	1	1	
	Y Axis	×	4	5	×	X	1	1	
	Z Axis	4	6	7	X	X	1	1	
	A Axis	X	5	9	X	X	1	1	
	B Axis	X	0	0	X	X	0	0	
!	C Axis	X	0	0	X	X	0	0	
	Spindle	X	0	0	X	X	0	0	
i									
						ОК	Car	ncel Ap	ply

C. This step is the most important step

In our computer the following setup for z-axis makes both "CW" and "CCW" to work.

In order to turn a motor with MACH 2/3,

- 1. click "z axis" button,
- 2. move velocity make the following cover.

You can also change the value of "steps per", "accel", "step Plus" and "dir pluse"

- 3. click "save axis settings"
- 4. click "ok"



## D. Setup Hot key:

System HotKeys Setup		×
Jog Hotkeys ScanCode ScanCode   X++ 51 X- 37   Y++ 38 Y- 40   Z++ 81 Z- 65   A/U++ 999 A/U- 999   B/V++ 999 B/V- 999   C/W++ 999 C/W- 999   System Hotkeys ScanCode DR0 Select 999   Load G-Code 999 Code L	External Buttons - OEM Codes Trigger # OEM Code 1 -1 8 -1 2 -1 9 -1 3 -1 10 -1 4 -1 11 -1 5 -1 12 -1 6 -1 13 -1 7 -1 14 -1 15 -1 ScanCode ist 999	
We use: q a		

to control "z++" and "z—"

E. Then turn on Jog model to make the "Jog  $\ensuremath{\text{OV/OFF}}$  " green.

Tool Information			
Tool	0	Change	
Dia.	+0.000		
Η 🧯	+0.000	0	
Auto Tool Zero			
Remember Return			
Elapsed ):00:00:00			
Jog ON/OFF Ctrl-Alt-J			

F: Congratulations: Now you can use "q" and "a" to control a motor in z-axis CW and CCW.