

iMach3 Pendant



Features

- Step, Velocity and Continuous jogging through MPG.
- Instant jogging mode change between Step MPG and Velocity MPG, with releasing or pressing a side mounted push button.
- Instant jogging mode change between Continuous MPG and Velocity MPG using the push button.

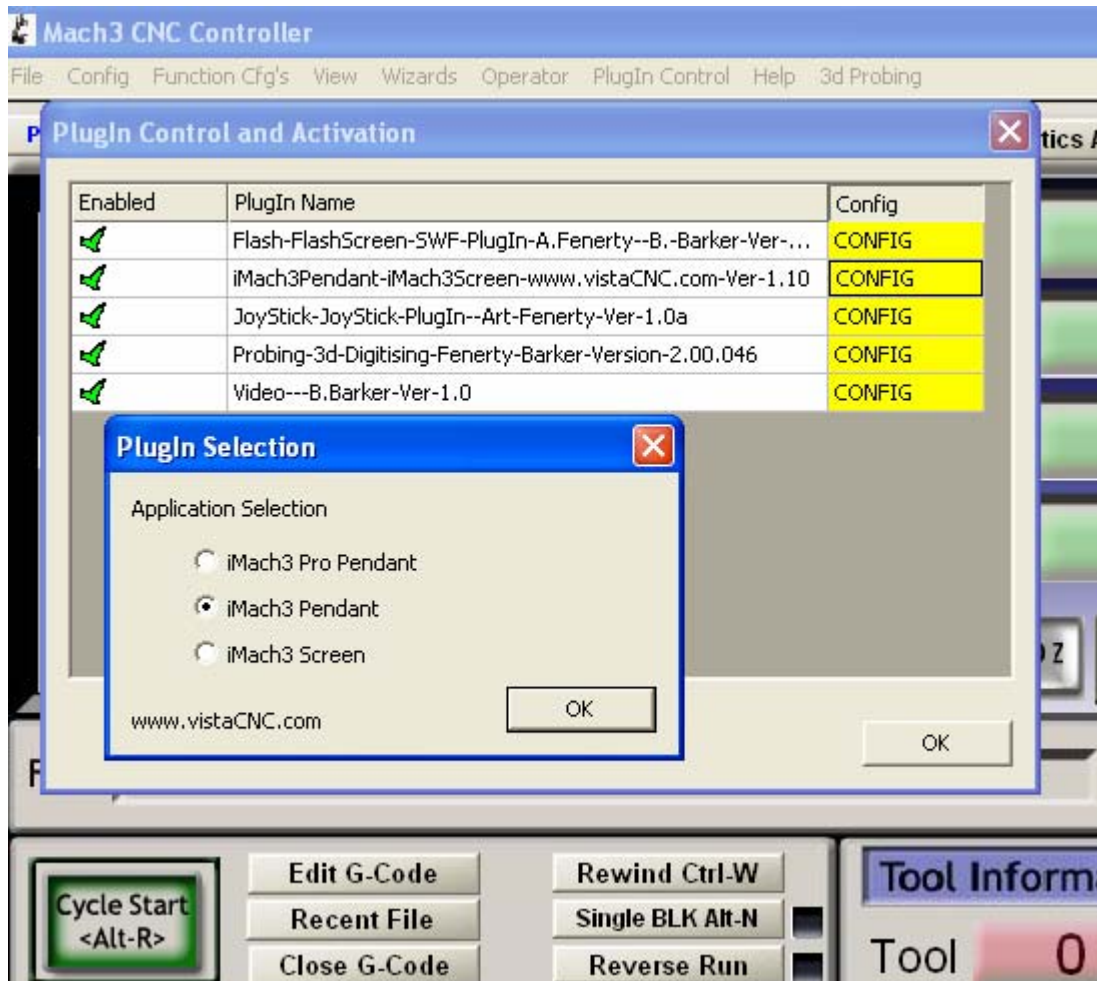
- Step MPG with any step size, starting from 0.0001.
- Velocity jogging providing axis movement with 0 to 100% of rapid speed, depending on how fast the hand wheel is turned.
- Continuous jogging creating constant speed axis movement, independent on the speed the hand wheel is turned.
- Feed rate and spindle speed adjustment on the fly through MPG.
- Continuous jog rate change through MPG.
- Use the push button to set work coordinate offset or reset Relative Coordinates.
- 4 axis selection through rotary switch.
- LEDs indicator for MPG mode and axis selection.
- Directly connect to PC through iMach3 Printer Port Card interface.
- Molded rubber sides providing an extra grip.
- Protection boot (optional).



PlugIn Installation and Configuration

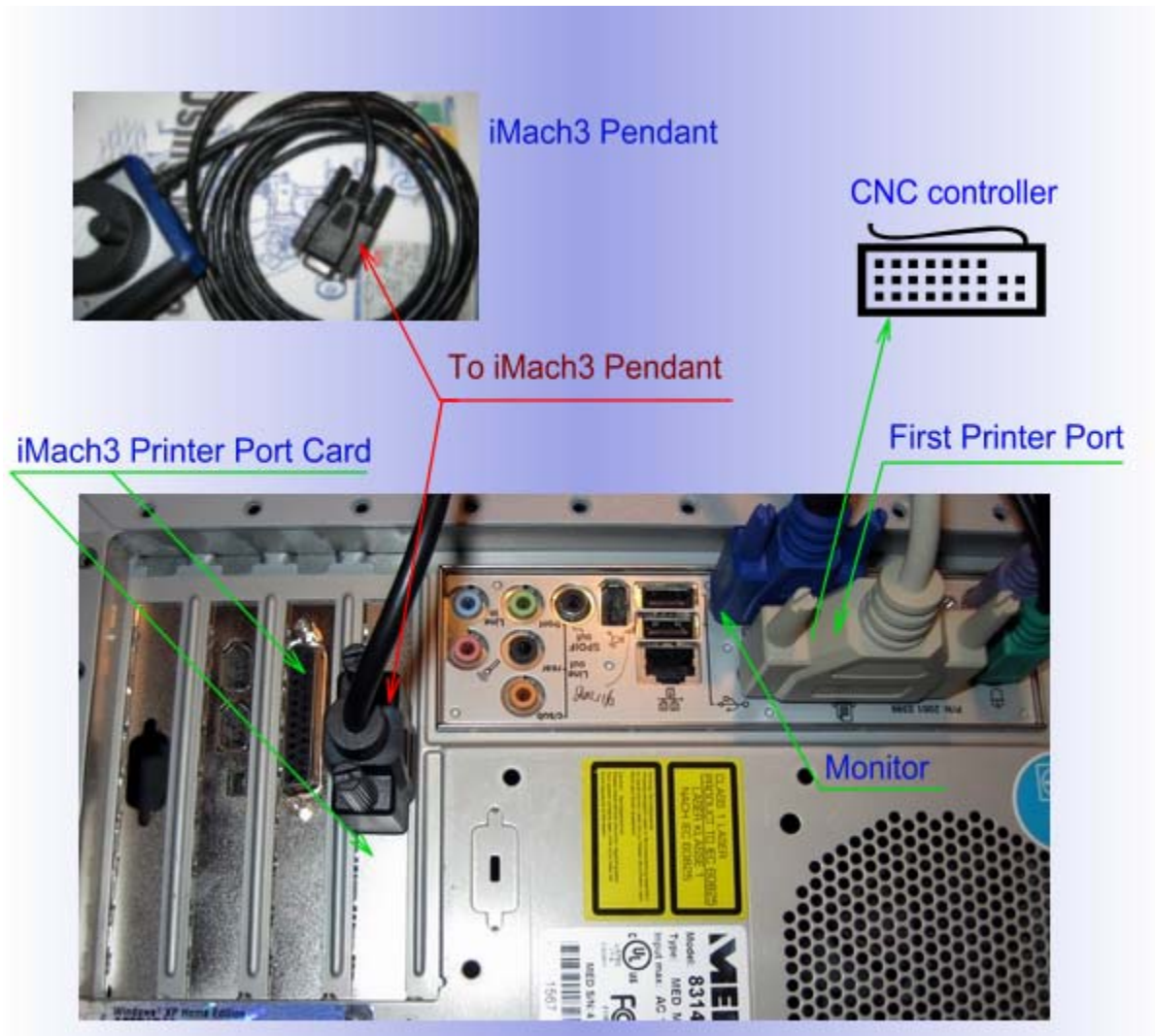
- Download iMach3PendantPlugIn from www.vistacnc.com download page.
- Double click the file, and iMach3Pendant.dll plugIn will be installed to your PC.
- Start Mach3 application.
- From menu, select config, then config PlugIns.
- Enable iMach3Pendant.

- Click CONFIG next to iMach3Pendant plugin.
- Select iMach3 Pendant.
- Click OK.



Connection

Directly connect to PC through iMach3 Printer Port Card:



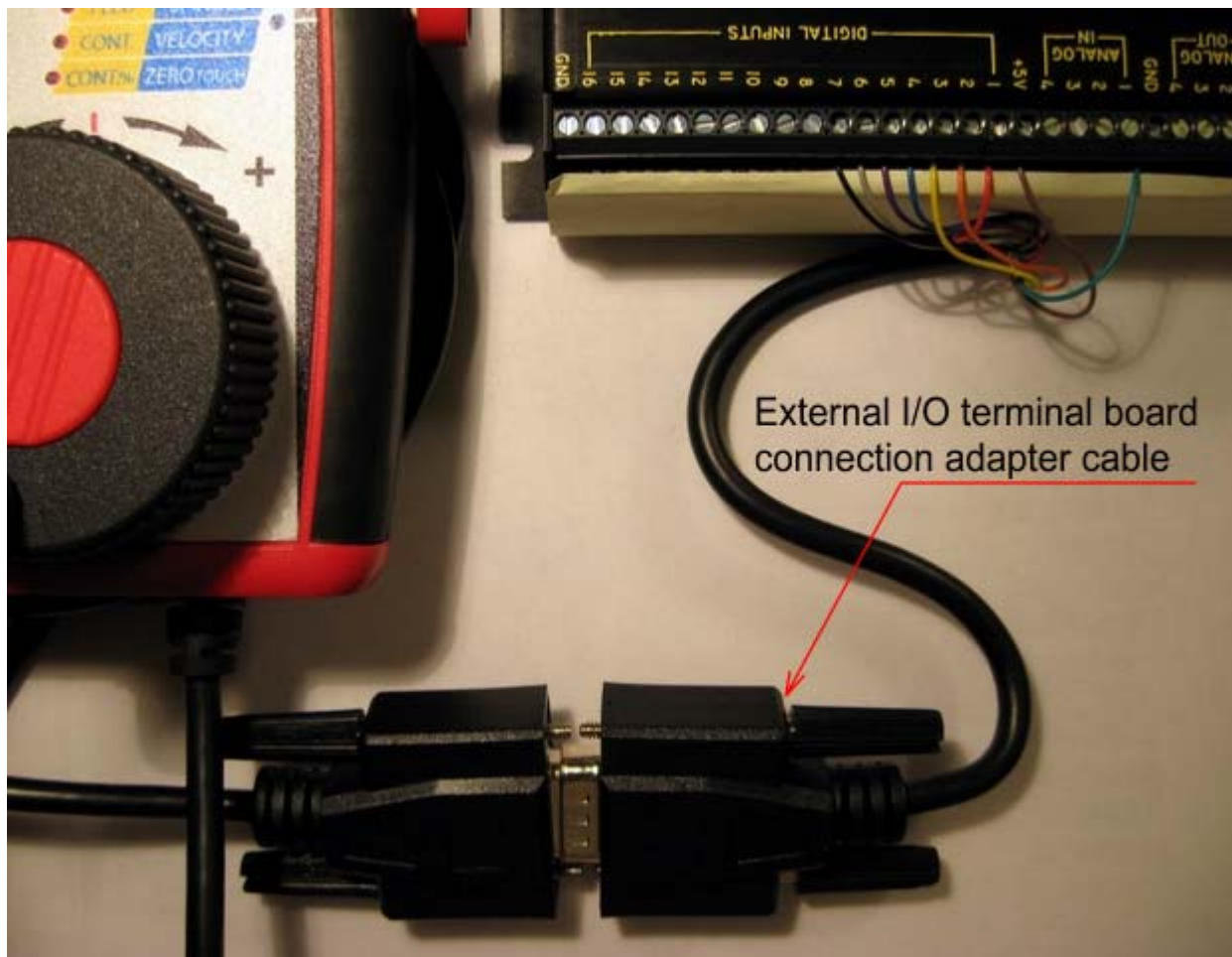
For more information about iMach3 Printer Port Card, check www.vistacnc.com printer port card.

Connect to PC through External I/O device:

Connect to PC through break-out board

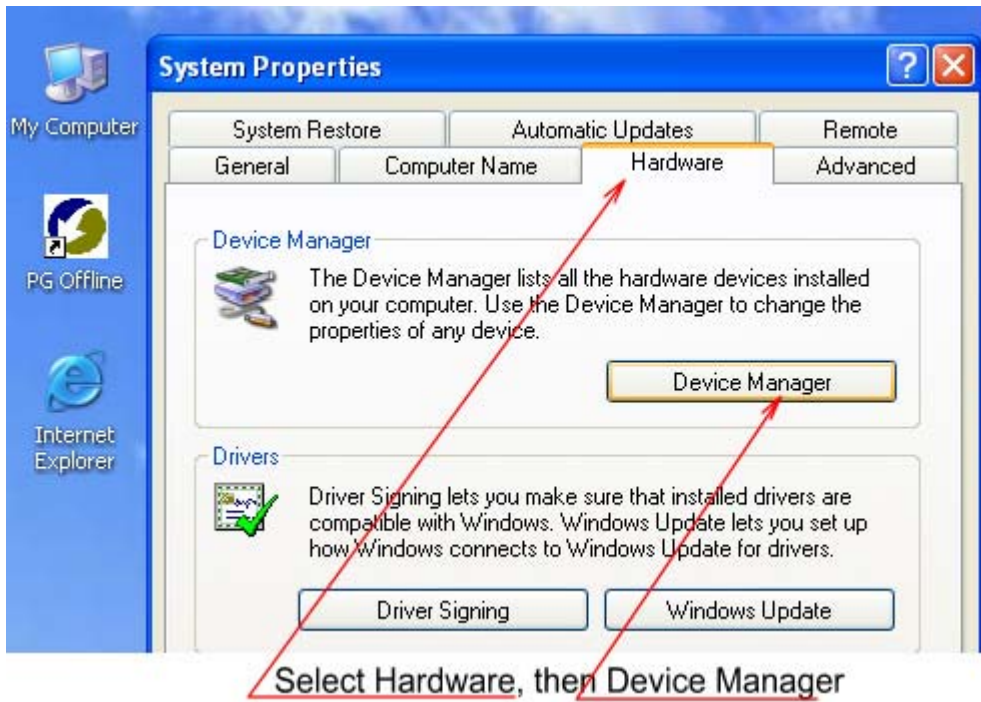
Pin and wire color for break-out board connection

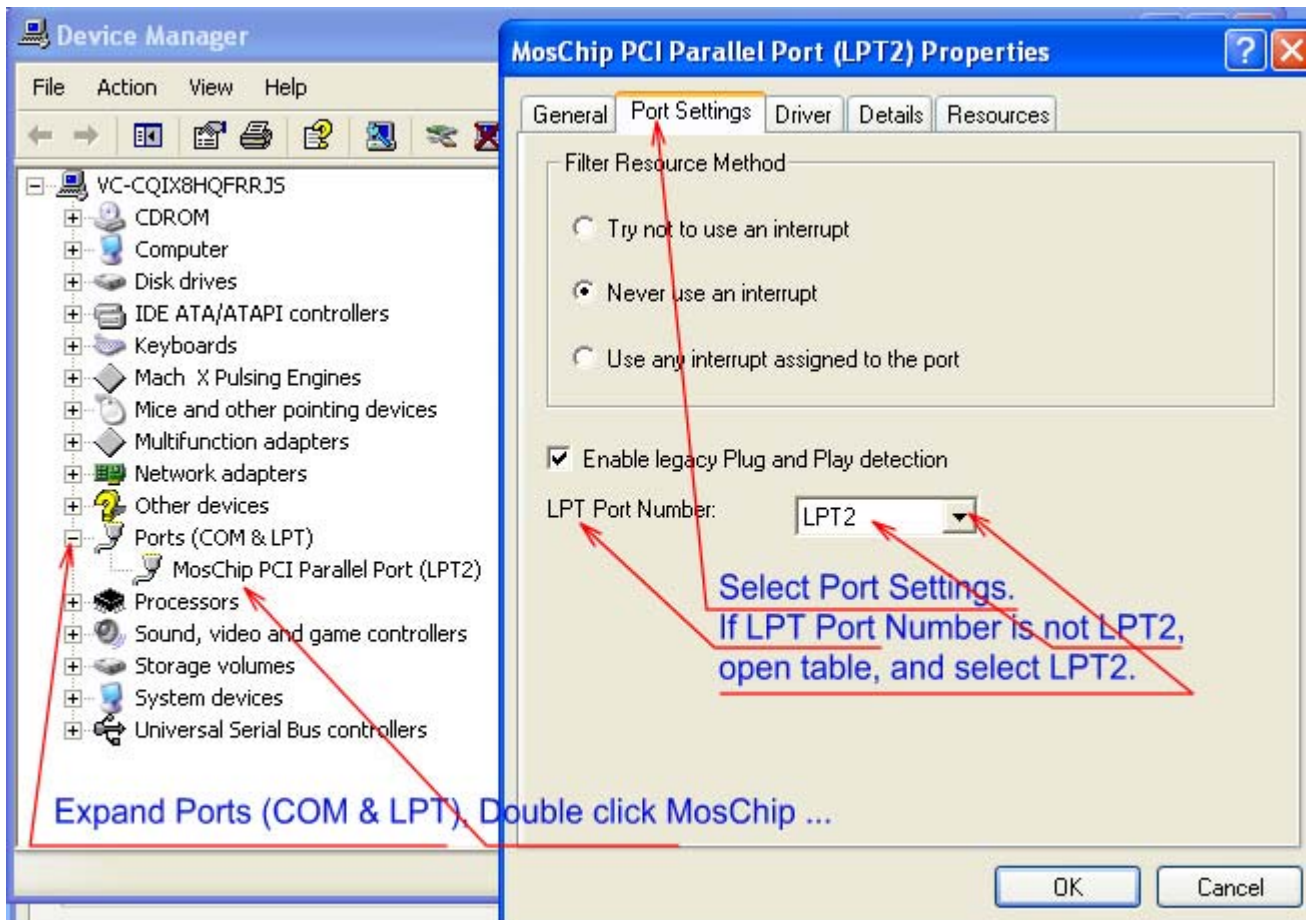
1	2	3	4	5	6	7	8	9
5v	MPG-a	MPG-b	OEM Trig #11	GND	#12	#13	#14	#15
Brown	Red	Orange	Yellow	Green	Blue	Volet	White	Black

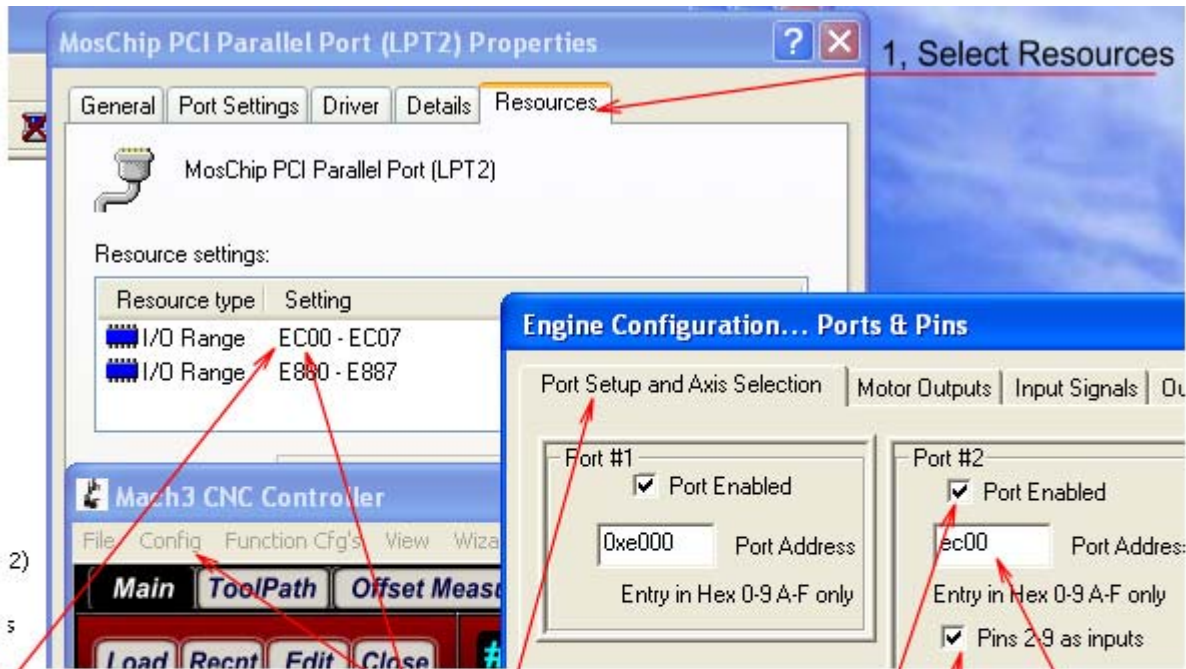


Setup

Find printer port address and configure port.







2, Write down port address.
here it is EC00

3, Click OK to close
the Properties page.

4, Open Mach3. Select Config.

5, Select Port and Pins.

6, Select Port Setup and Axis Selection.

7, Check Port Enabled.

8, Check Pins 2-9 as inputs.

9, Write in the number got from Resource page.

10, Click OK to close the page.

Configure Pins

MPG Pin setup

Engine Configuration... Ports & Pins

Port Setup and Axis Selection | Motor Outputs | Input Signals | Output Signals | Encoder/MPG's | Spindle Setup | Mill D

Signal	Enabled	A -Port #	A -Pin #	B -Port #	B -Pin #	Counts/Unit	Velocity
Encoder1		2	8	2	9	1.000000	100.000000
Encoder2		2	8	2	9	1.000000	100.000000
Encoder3		2	8	2	9	1.000000	100.000000
Encoder4		2	8	2	8	1.000000	100.000000
MPG #1		2	2	2	3	1.000000	100.000000
MPG #2		2	8	2	9	4.000000	80.000000

Adjust this from 50 to 150 for desired Velocity MPG response.

OEM Trig # 11, 12, 13, 14, and 15 are used.

Input signal Pin setup

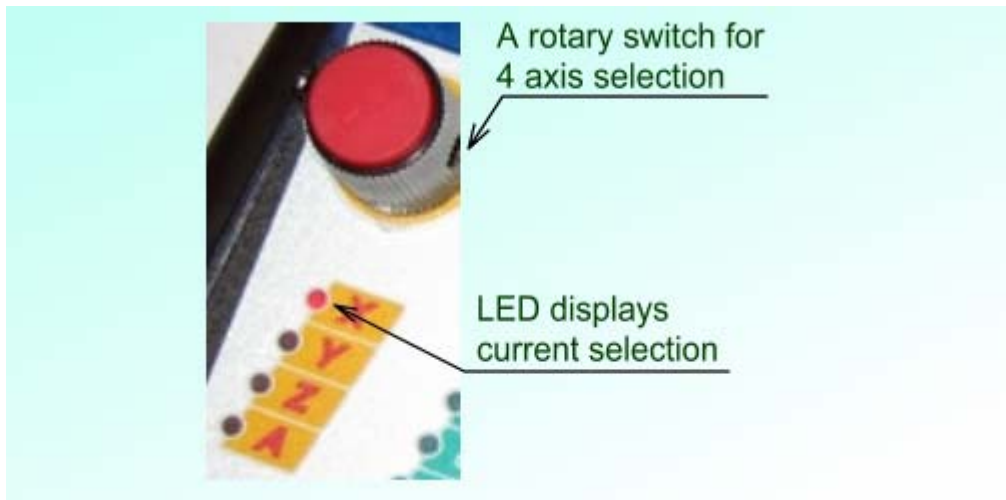
Engine Configuration... Ports & Pins

Port Setup and Axis Selection | Motor Outputs | **Input Signals** | Output Signals | Encoder/MPG's | Spindle Setup | Mill Options

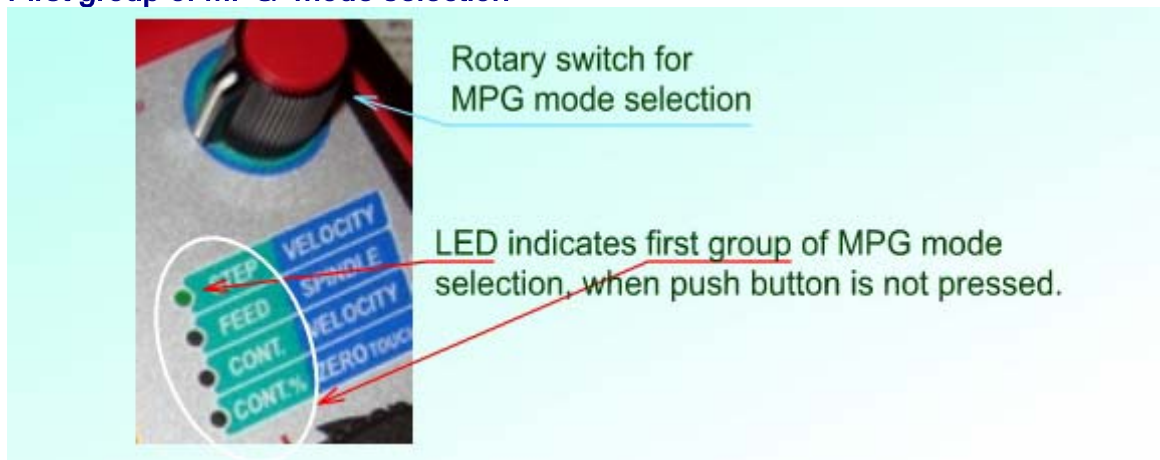
Signal	Enabled	Port #	Pin Number	Active Low	Emulated	HotKey
OEM Trig #9	✘	0	0	✘	✘	0
OEM Trig #10	✘	0	0	✘	✘	0
OEM Trig #11	✔	2	4	✔	✘	0
OEM Trig #12	✔	2	5	✔	✘	0
OEM Trig #13	✔	2	6	✔	✘	0
OEM Trig #14	✔	2	7	✔	✘	0
OEM Trig #15	✔	2	8	✔	✘	0
Timing	✘	0	0	✘	✘	0
Jog X++	✘	0	0	✘	✘	0
Jog X--	✘	0	0	✘	✘	0

Functions and Operations

- **Axis selection**



- **First group of MPG mode selection**



Within first group of MPG modes (push button is not pressed), using rotary switch can select

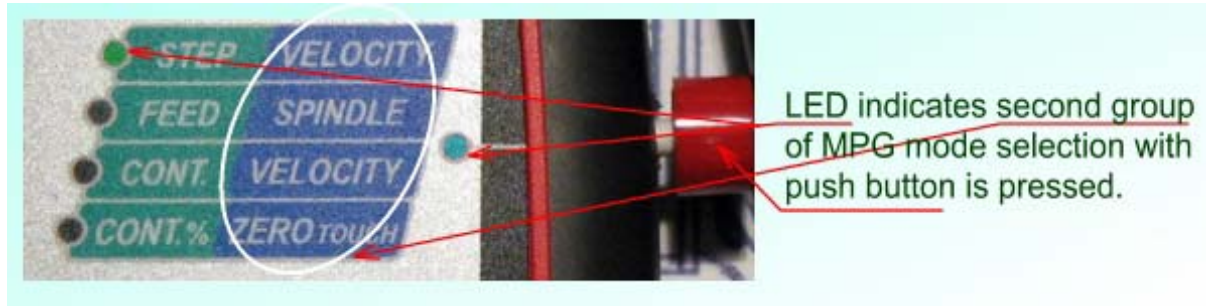
Step MPG: One step per MPG detent. Step size is set up in the Mach3 Screen. It accepts any step size.

Feed: Changes feed rate up or down when turning MPG in the clockwise direction or counter clockwise direction. Feed rate can be changed when machine is cutting.

Cont. Moves axis with constant, selected speed toward positive direction or negative direction when turning MPG in the clockwise direction or counter clockwise direction. The axis movement is independent to the speed the MPG is turned.

Cont % Changes the speed used in Cont. mode up or down when turning MPG in the clockwise direction or counter clockwise direction. The rate is displayed in Slow Jog area in iMach Screen.

- **Second group of MPG mode selection**



Within second group of MPG mode (push button is pressed), using rotary switch can select combined with pressing the push button can select:

Velocity MPG: Provides axis movement with 0 to 100% of maximum rapid speed, depending on how fast the hand wheel is turned.

Spindle: Changes spindle speed up or down when turning MPG in the clockwise direction or counter clockwise direction. Spindle speed can be changed when machine is cutting.

Zero / Touch: In this mode, pressing push button will create different actions. If current screen page is “offset measure” in iMach Screen, pressing the button will setup work coordinate offset. If in “Main” screen page, pressing the button will bring up “Relative Coordinates”, if “Relative Coordinates” is not selected or it will zero the readings of selected axis in “Relative Coordinates”.

- **Examples**

1. Press the side push button, use velocity MPG to move work piece near the target location, then release the push button to change to step MPG mode for accurate movement.

2. Use Cont. MPG mode for a flat cutting, then pressing push button to change to Velocity mode to quickly move work piece to another position, release the button to Cont. mode for next around cutting.

Specifications

- Work with Mach3 R2.63 and above.
- Work with Mach3 standard screen (including flash screen) and custom screen.
- 36 PPR MPG.
- 36 detents per Rev.
- Ball bearing wheel.
- 200,000 cycle life.
- $\varnothing 0.2''$, 10' cable (expandable) with DB9 Female connector.
- iMach3 Printer Port Card direct connection ready.
- Size (over all) 4.8"(L) x 3.5"(W) X 2.4"(H)

- **MPG**



36 Detents per Revolution.
36 Pulse per Revolution.
200,000 Revolution life.
Use of ball bearing for smooth movement.

- **Connection**

