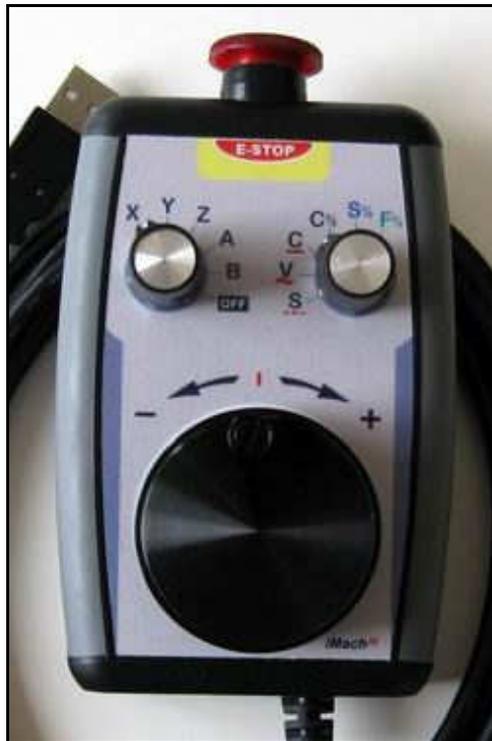


iMach^{III} P1 CNC Control Pendant



PREFACE

Any machine tool, including computer controlled machine tool, is potentially dangerous. VistaCNC LLC accepts no responsibility for any damage or injury caused by its use. It is your responsibility to insure that you understand the machine you are using and the procedures for safety operations.

If you are in any doubt you must seek guidance from a professionally qualified expert rather than risk injury to yourself or to others.

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WARNING

**E-STOP switch button in iMach^{III} P1 CNC Control Pendant only provides
Emergency STOP signal to Mach3 CNC application.**

**For further protection in CNC operation, other emergency protection methods
may be needed.**

FEATURES

- Plug n' Play USB connection and controls.
- Step, Velocity and Continuous mode jogging through MPG.
- Feed rate, Spindle speed, and Slow Jog rate change through MPG.
- 5 Axis selections.
- E-Stop button.
- Molded rubber sides providing an extra grip.
- Protection boot (optional).

PLUGIN

- Download the latest iMach3-P1 v3.x Plugin from www.vistacnc.com download page.
- Move the plugin file into Mach3 Plugins directory.

CONNECTION and START

- Directly plug the USB cable into any USB port on the PC.
- Start Mach3 application.
- Click Config from menu, select Config Plugins, and enable iMach3-P1-Pendant.
- Close Mach3 application and restart Mach3 application.

FUNCTIONS and OPERATIONS

1. Axis selection

- Turn axis selection knob to select an axis to jog.
- If axis selection knob is in OFF position, except E-stop signal, no other signals will be sent to Mach3 application.

2. MPG (Manual Pulse Generator) mode and control selection

While the pendant is used to move an axis, any one of other 3 jogging methods (Step, Cont or MPG) on Mach3 screen can be selected to move another axis using, for example, Keyboard.

2.1 Step mode : One step per MPG click (detent).

2.1.1 One step per MPG click (detent). Step size can be set up and changed in Mach3 Screen. Default size is 0.001.

2.1.2 A fixed MPG feed rate can be setup in PlugIn Configuration table. This feed rate is used only when MPG moves in Step mode.

- ❖ *It is recommended to use higher feed rate for smooth movement.*
- ❖ *When using larger step size, turn the MPG wheel at proper speed or wait for machine to finish one step before making another click.*
- ❖ *Turning MPG too fast and make too many steps will back up steps and the machine will continue running for some time after MPG stops.*
- ❖ *If a longer movement is needed, consider to use Velocity mode jogging.*

2.2 Velocity mode : Axis moves at 0 to 100% of maximum axis speed based on how fast the MPG wheel is turned.

2.2.1 Speed change sensitivity can be setup in PlugIn Configuration table.

2.3 Continuous mode : Axis moves at Slow Jog Rate. The axis movement is independent to the speed at which the MPG is turned.

2.3.1 To avoid accidentally moving MPG and axis, steps to delay the start of axis movement can be set in plugin configuration table.

- ❖ *The Slow Jog Rate can be changed using C% mode MPG or on Mach3 Screen.*

2.4 Slow Jog Rate mode : Changes the speed used in Continuous mode. The rate is displayed in Slow Jog Rate DRO (Digital Read Outs) on Mach3 Screen.

- ❖ *TAB screen or MPG screen will pop up if the TAB screen stay time is not set to 0 in PlugIn Configuration table.*
- ❖ *The TAB screen will close if the stay time is reached or if MPG mode is moved a mode other than Slow Jog Rate mode.*

2.5 Feed Rate mode : Changes feed rate overridden (FRO) rate from 1% to 250 %. FRO rate can be changed when axes are moving.

2.6 Spindle Speed mode **S%**: Changes spindle speed overridden rate from 1% to 250%. Spindle speed can be changed when the spindle is running.

3. E-Stop switch button



- Pushing down E-STOP switch button will send out E-Stop signal to Mach3 application and it turns to activate Emergency Mode in Mach3 application.
- The button will be locked down when pressed. Twist the switch to reset it on.

PENDANT PLUGIN CONFIGURATION

In Mach3 menu, select Config, then Config Plugins



In Plugins menu, click CONFIG

	<input type="text" value="8"/>	Speed Change Sensitivity
	<input type="text" value="100"/>	MPG Step Jogging FeedRate. Set 0 to Skip
	<input type="text" value="25"/>	Steps to Delay Start, 0 to 100.
	<input type="text" value="3"/>	TAB Screen Display Time, Set 0 for No TAB Screen.

- Number in  is used to adjust the sensitivity of  mode. The smaller the number, the less turns are needed to reach maximum speed.
- Number in  is the feed rate used in MPG step jogging. When MPG wheel stops, the feed rate and FeedRate Overridden rate (FRO) will automatically change back to the number which was used before MPG moving. Input 0 is to use current FeedRate and FRO rate in the system in MPG step jogging.
- Steps to Delay Start in  is used to set up a step number. Axis starts to move only after that many steps are turned from MPG wheel.
- Number in TAB Screen Display Time in  is to set up the TAB screen stay time in seconds. The TAB screen will close if the stay time is reached or if MPG mode is moved to a mode other than  mode. Put 0 to skip the TAB screen.

SPECIFICATIONS

- Work with Mach3 R2.63 and above.
- 36 steps (clicks) per Rev MPG.
- 200,000 cycle life MPG.
- Shipped with 10' High Speed USB cable. Extendable to 15' with extension cable, and to 45' with USB hub cables.
- Size (over all) 5.1"(L) x 3.1"(W) X 2.1"(H)