

iMach^{III} P2 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} P2 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.
- Step size selection.
- Program Start, Stop, Hold, and Rewind control.
- E-Stop with flash LEDs indicator.

PLUGIN

- Download the latest iMach3-P2 v4 Plugin from www.vistacnc.com download page.
- Move the plugin file to Mach3 Plugins directory.
- Start Mach3 application.
- Click Config from menu, select Config Plugins, and enable iMach3-P2-Pendant.
- Close Mach3 application and restart Mach3 application.

CONNECTION

Directly plug the USB end of the cable into any USB port on the PC.

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




- Select MPG mode in Jog Mode selection:

- Press and hold side the button  to select MPG mode on inner ring. Release the side button to select MPG mode on outer ring.
- Single clicking the side button will open or close the TAB window.

NOTE:

Single clicking a button requires pressing and releasing the button once within 0.5 to 1 second.

The action is similar to single clicking a button on Mach3 screen.



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

Double clicking the side button in step mode will cyclically select the step size based on step size setup in PlugIn Configuration Window. See Pendant PlugIn Configuration section for more information.

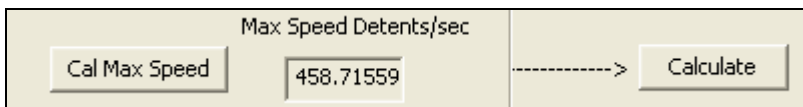
NOTE:



Double clicking a button requires pressing and releasing the button twice within 0.5 to 1 second. The action is similar to double clicking a button on Mach3 screen.


Step size can also be set up directly on Mach3 screen. See Mach3 manual for more information.


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

Speed change sensitivity can be adjusted on Mach3 screen. Select Function Cfg's in main menu, then Calibrate MPG.





 has greater sensitivity than .

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

2.4 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.



2.5 Feed Rate mode **F%**: 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.

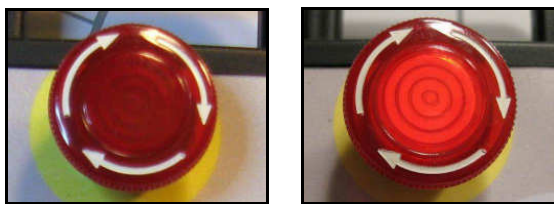
2.7 Cycle Start / Feed Hold control  / : Double clicking the side button will Start or Pause the program.

When program enters Cycle Start state, E-STOP LED will keep steady-on.

When program enters Feed Hold state, E-STOP LED will, in every second, flash twice in the first half second and stop flashing in the next half second.

2.8 Stop / Rewind control  / : Double clicking the side button will stop or rewind the program.

3. E-Stop switch button



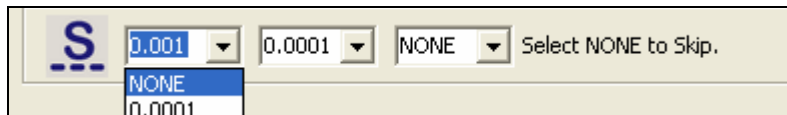
- Pushing down E-STOP switch button will send out E-Stop signal to Mach3 application and in turns to activate Emergency Mode in Mach3 application.
- The button will be locked down when pressed. Twist the switch to reset it on.
- When the button is pressed down and locked, the embedded LED will flash at ¼ second rate.
- When Mach3 application is in Reset mode and the button is released, the LED will flash at ½ second rate.

PENDANT PLUGIN CONFIGURATION

In Mach3 menu, select Config, then Config PlugIns



In PlugIns menu, click CONFIG



Select predefined step size in each dropdown window. Select NONE to skip that window in cyclic step selection. Step size in the first window is used as the default step size.

SPECIFICATIONS

- Work with Mach3 R2.63 and above.
- 100 steps (clicks) per Rev MPG.
- MPG MTBF > 10000 hour.
- Shipped with 10' High Speed USB cable. Extendable to 15' with extension cable, and to 45' with USB hub cables.
- Size (over all) 6.1"(L) x 3.1"(W) X 2.7"(H)