

MPG-V1.1 Operating instruction



Please install an emergency stop before use and ensure that the emergency stop switch can work normally. In case of emergency, you can press the emergency stop button or unplug the USB cable. Please strictly follow the instructions and warnings to use this product, otherwise any direct / indirect personal injury, our company does not assume any responsibility.

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Features:

1. Can manually control 5 axes to run
2. Three speed gears, selected by SPEED button on the handle: low speed (50pulse/S); medium speed (500pulse/S); high speed (5000pulse/S)
3. Support MACH3 MPG MODE : Velocity mode, Step / Velocity mode
4. Velocity mode: Press the button, the motor runs, Release the button, the motor stops.
5. Step/ Velocity mode: Mach3 converts pulses number which was emitted by the MPG into the corresponding motion distance. Running distance = number of pulses * override (to select override in mach3 software)
6. The shell size of handle: 130mm*60mm*25mm
7. The cable's natural length is 0.8m, can be extended to a maximum length 3m.

Button and indicator description:

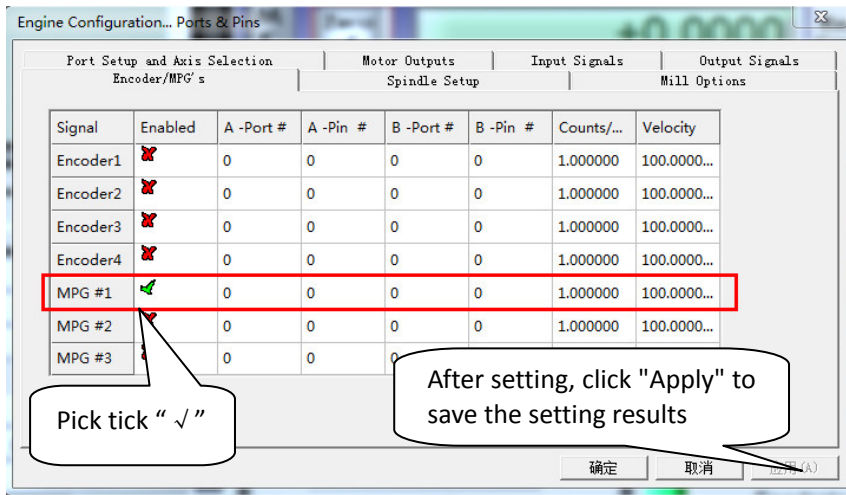
Mark	Description
MPG	MPG ON/OFF button
SPEED	Speed gear selection button
ON/OFF	MPG work LED
L	Low speed indicator LED
M	Medium speed indicator LED
F	High speed indicator LED
X+	X-axis positive direction button
X-	X-axis negative direction operation button
Y+	Y-axis positive direction button
Y-	Y-axis negative direction operation button
Z+	Z-axis positive direction button
Z-	Z-axis negative direction operation button
A+	A-axis positive direction button
A-	A-axis negative direction operation button
B+	B-axis positive direction button
B-	B-axis negative direction operation button

MPG connection:

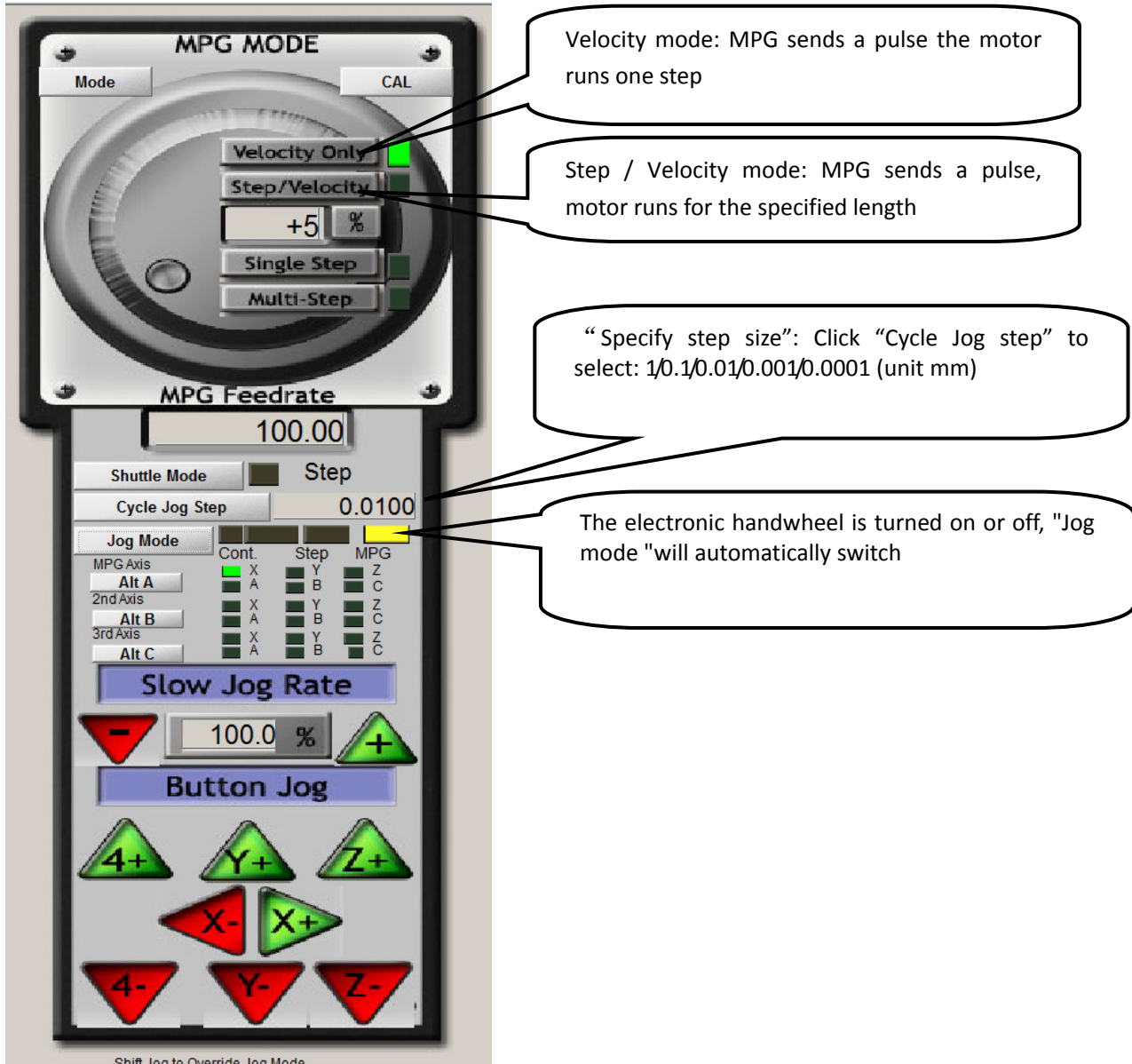
Plug the DB15 connector into the USB control card and tighten the screws to complete the connection.

MPG configuration:

MPG does not need to install the driver, mach3 needs to be configured as shown:
The Mach3 Menu => Config => Ports and Pins => Encoder/MPG'S

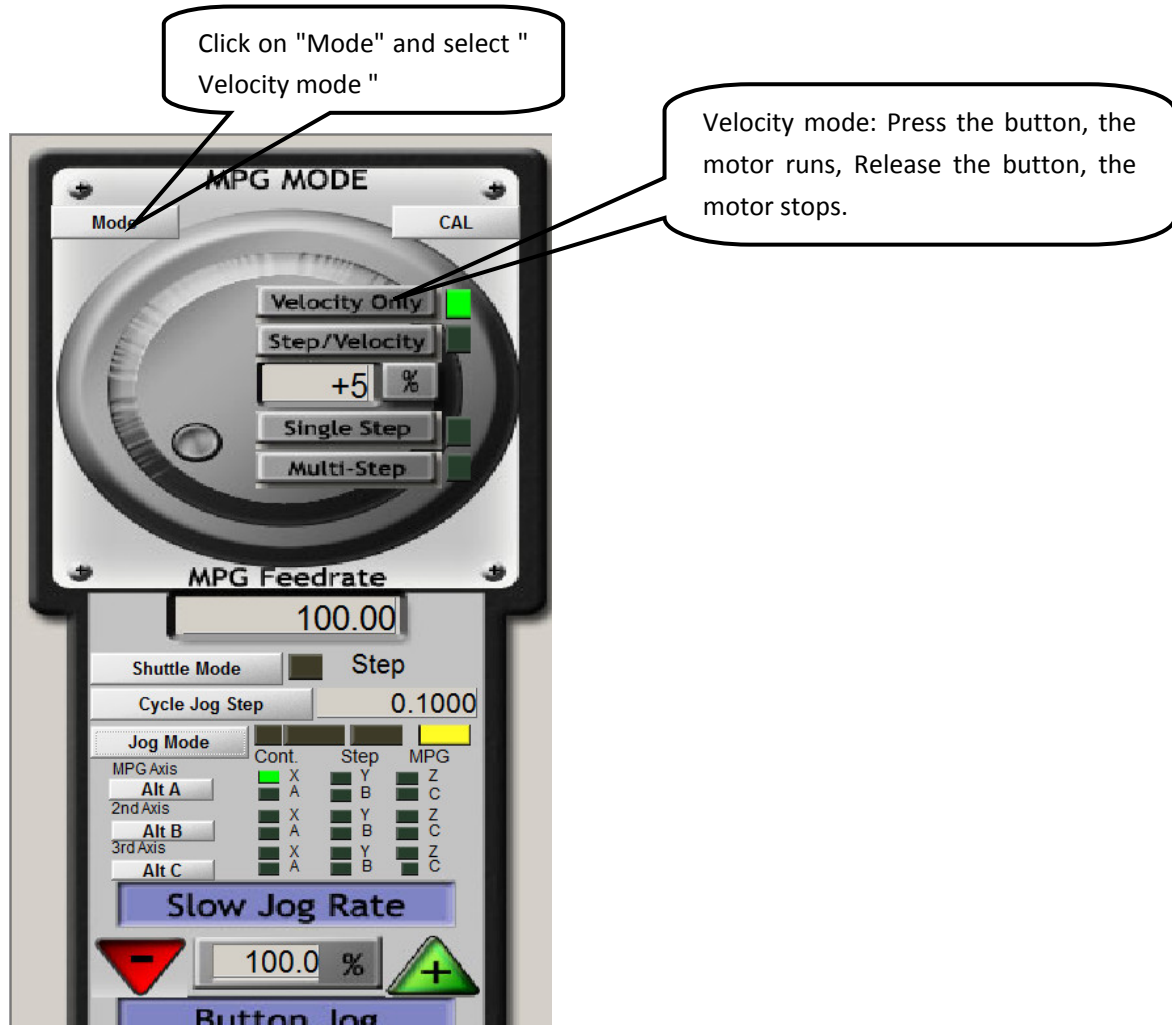


Press the “Tab” key on your keyboard, to bring up the “MPG MODE” , MPG mode can be selected or view MPG status.



Velocity mode operation:

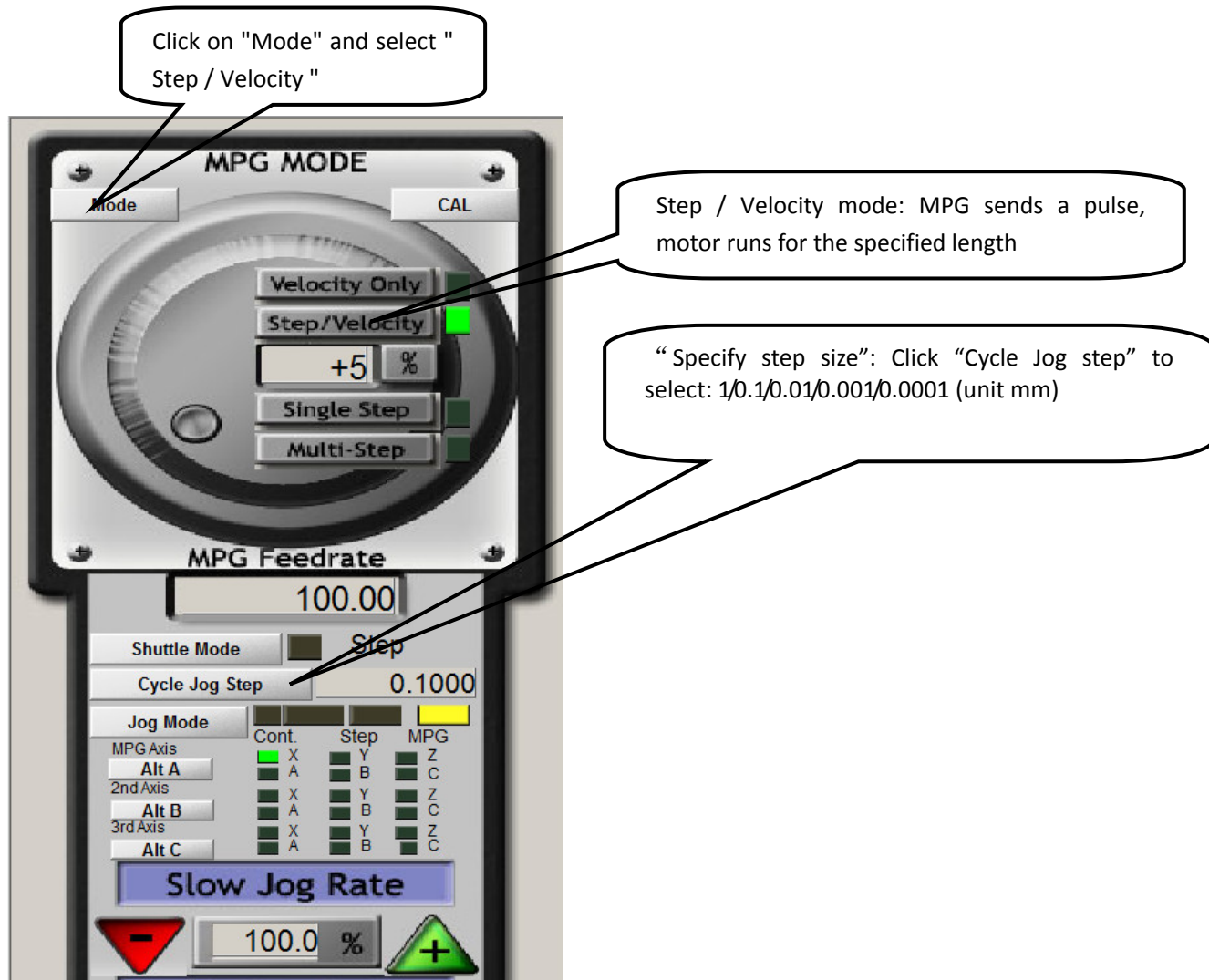
Press the "Tab" key on your keyboard, to bring up the "MPG MODE" , Click on "Mode" and select " Velocity mode ":



Operation: Turn on the MPG switch, select the speed gear you want, press the axis button you want to control, the motor runs, release the button, the motor stops.

Step/ Velocity mode operation:

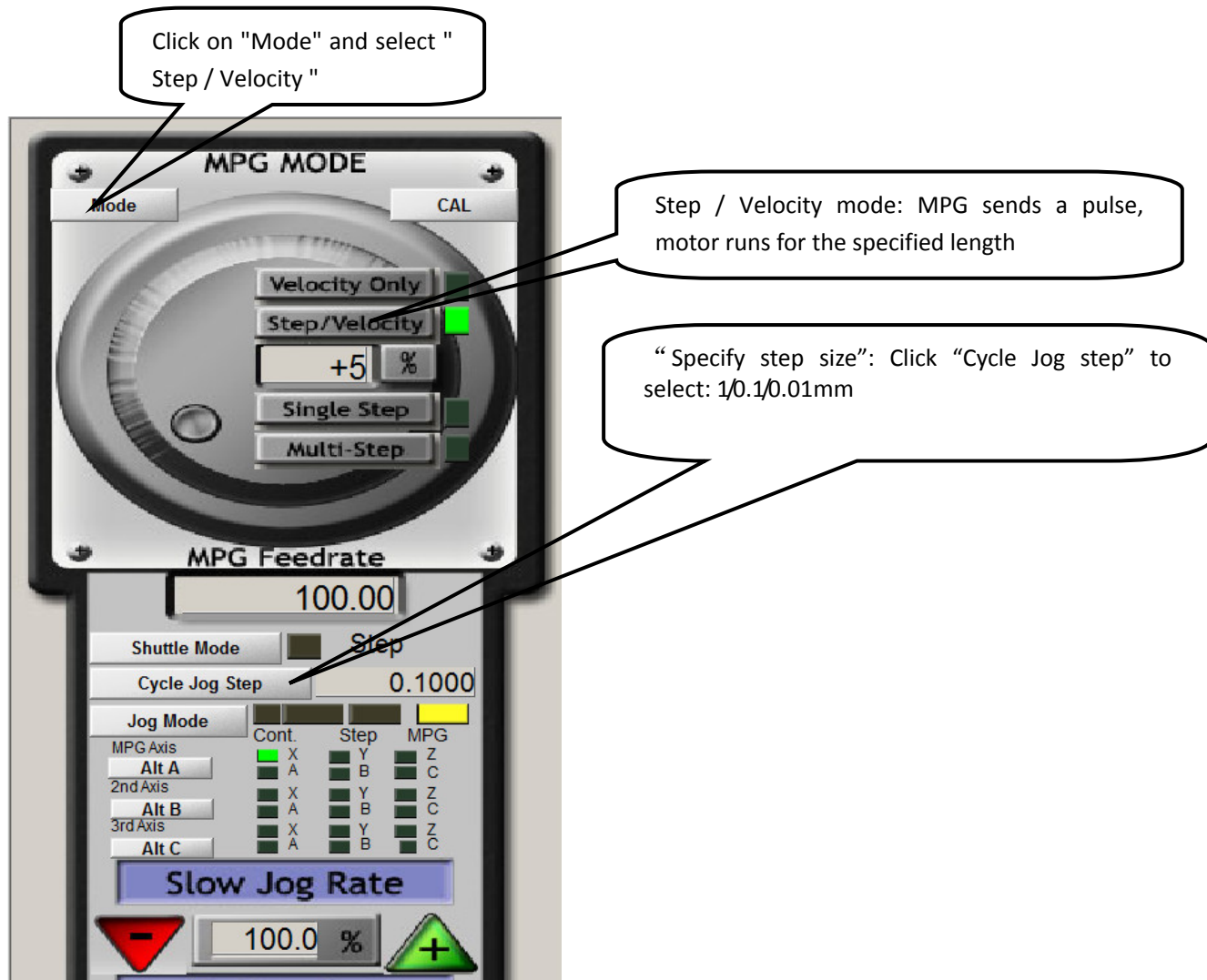
Press the "Tab" key on your keyboard, to bring up the "MPG MODE" , Click on "Mode" and select " Step/ Velocity mode operation " , Click "Cycle Jog step" to select Specify step size (1/0.1/0.01/0.001/0.0001mm) .



Note: Select "Step / Velocity" mode, the operation will have a feeling of delay, the button has been released, the motor will continue to run. Explanation: axis running distance = number of received pulses * X (X = 1 / 0.1 / 0.01 / 0.001/0.0001), the motor will not stop running until the pulse number is completely converted into the running distance. The larger the X number, the higher the gear position, the more obvious the delay. Select "Step / Velocity" mode, please operate with caution.

How to operate the axis to run a specified length:

Press and hold the "SPEED" button for more than 2 seconds. At this time, the L, M, and F LEDs will be on. The MPG will enter a pulse mode. Press the axis button and send a pulse. The motor runs a specified length, as shown below. As shown, when the button is pressed, the axis will run 0.1mm.



Note: One pulse mode only supports three running distances of 1/0.1/0.01mm, and the running distance of 0.001/0.0001mm is not supported. In 1 pulse mode, the button is only allowed to be pressed within 1 second, Press the button multiple times in 1 second, only the first press will work.