

## OPERATING THE MACHINE IN MANUAL MODE

All PATRIOT VFD and MILL TURN machines can be operated manually with a simple change in the VFD codes. This will unlock the stepper motors so that you can turn them by hand and allow you to control the spindle speeds and direction from the VFD keypad.

1. Turn your CNC POWER and STEPPER MOTOR switches to the OFF position.
2. On the VFD key pad, press ENTER twice and the display will read P0-000.
3. Press ENTER again and the setting will be flashing- use the UP or DOWN arrow key to set the display to 0 Press ENTER to save.
4. Now press the UP arrow until you reach P0-002. Press Enter and the current setting will be flashing. Press the UP or DOWN arrow to select 0 Press ENTER to save.
5. Press the MON/ESC button twice to exit setup.

Your display should now be reading all zeros.

Press the RUN button and turn the small speed control knob and your spindle should begin to turn. If it is going the wrong direction, press the DIR/JOG button.

You can now control the speed and direction of the spindles with the speed knob and operate the carriages by hand.

When you are running in MACH3 mode, you can make yourself a speed chart by asking the spindle to go 1000 rpm, and then recording the Hz reading on the keypad. Then you will have an easy reference point to set the Hz settings for various spindle speeds under manual control.

NOTE: On PATRIOT machines keep the Forward-Neutral-Reverse switch in the Neutral position. MILL TURN machines do not have this manual switch.