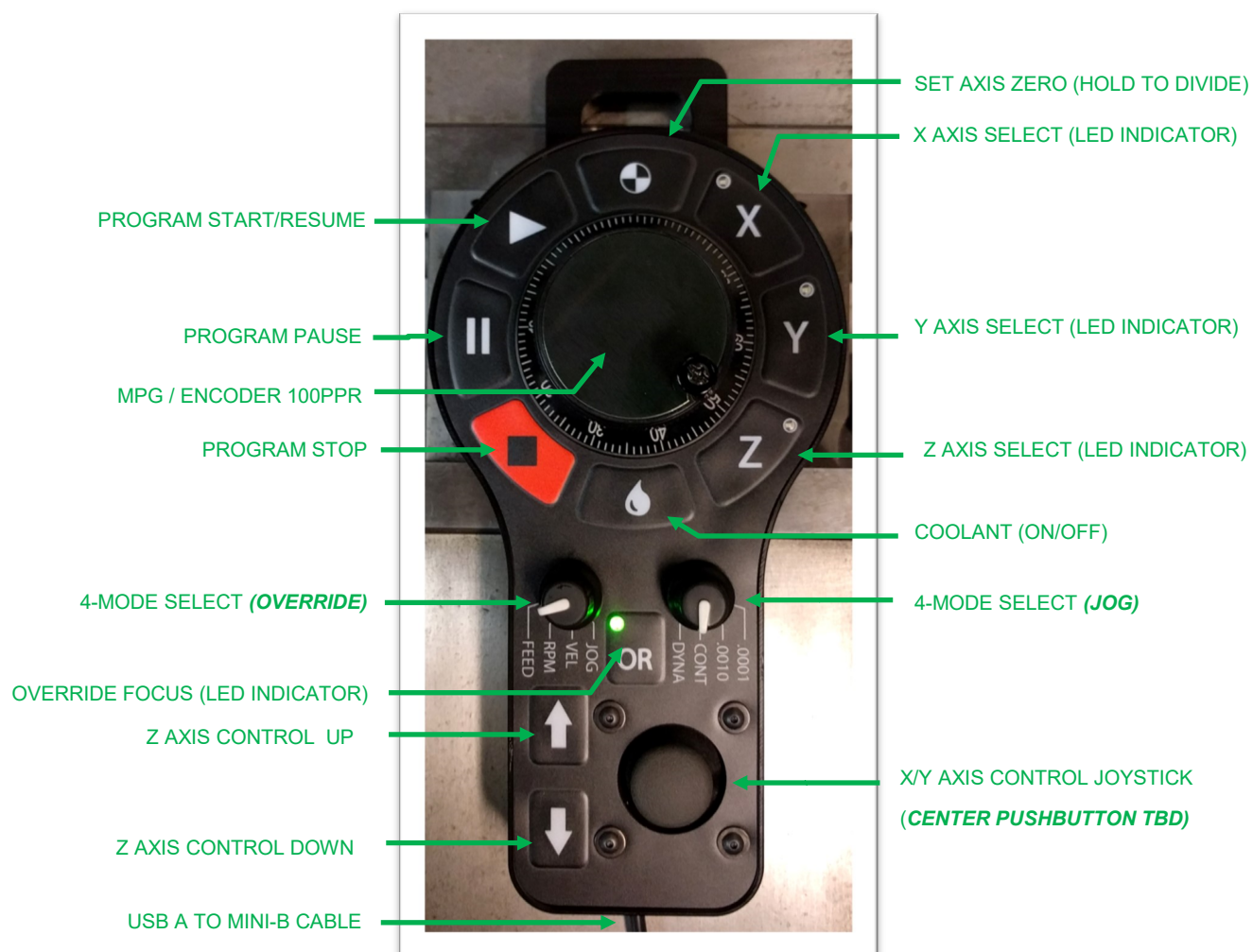


User Interface

(See pages below for operations)

The interface is divided into 3 main sections. A quick positioning lower portion using the Joystick and UP/DOWN buttons. A fine tuning upper right position using the MPG and axis select buttons. Finally, the upper left is primarily used for in process GCODE program function. Each section is used throughout the setup and operation of the machine. Although the interface takes some time to get familiar with, it quickly becomes natural after usage.

I am working to make a couple Youtube videos for the different modes.



Override Mode (OR)

To change an override value, turn the rotary select (override) knob to the slider you would like to adjust, or press OR. If not in OR (override) mode, the pendant will automatically illuminate the OR indicator and focus the MPG output to control the override selected. Rotate the MPG to the value you would like. You can change the FEED / RPM / MAX VELOCITY / JOG sliders using this method. This is particularly useful on new programs, whereas, you can start a program and rapidly dial down/up the velocity control on tool approach.

To focus the MPG back to an axis, select the axis to control and this will remove focus from the Overrides. This is indicated by the LEDs and an audible beep from the pendant.

X/Y Axis Joystick

The Joystick is used to traverse the machine table in the X and Y axis. It will react according to the position of the JOG rotary selector.

CONT (continuous) mode will move according to the JOG percentage slider on the Pathpilot UI. This is particularly useful for manual milling operations, whereas, you want constant speed through the operation. The direction of the Joystick is “detuned” to prevent drift from the user while holding it down in a certain direction. This allows for even and straight cuts in the X and Y axis. Simultaneous axis movement is possible, however, is usually left for the Dynamic positioning mode.

DYNA (dynamic) mode will move according to the pressure and direction applied. The more pressure you apply the faster the jog. Full simultaneous axis movement is allowed and encouraged. This is particularly useful for rapid positioning of the tool in relation to the part.

MPG / Encoder

The MPG / Encoder controls the most features of the pendant. Depending on the mode it will react differently.

Jog (X / Y / Z)

.0001" MODE - Increment the selected axis by .0001"

.0010" MODE- Increment the selected axis by .0010"

CONT MODE - Jog the selected axis from JOG percentage from the controller.

DYNA MODE - Dynamically jog and step the selected axis from rotation speed .0001-5IPM. Based on user input, this may be adjusted in the future.

Override (OR)

FEED MODE - Adjust FEED value

RPM MODE - Adjust RPM value

VEL MODE - Adjust MAX VELOCITY value

JOG MODE - Adjust JOG value

UP / DOWN (Z Axis)

The UP / DOWN buttons traverse the Z axis movement. Depending on mode they will react differently. In CONT mode this allows for drilling manually at a controlled feed.

CONT MODE - Traverse the Z axis UP and DOWN from JOG percentage

DYNA MODE - Traverse the Z axis UP and DOWN at rapid speed

COOLANT

The "water drop" button will cycle the coolant ON and OFF.

PROGRAM START / RESUME

The START button will start a loaded GCODE program. If a program is already in process it will RESUME the program.

ORIGIN (SET ZERO)

The ORIGIN button is used to set the zero of a selected axis. Once pressed there is a 50ms delay, to help prevent an accidental keypress, and it will set the selected axis to zero. This can be confirmed with an audible tone from the pendant. If you hold the button for more than (2) seconds it will beep 3 times and automatically divide the axis by two to find center.

X / Y / Z AXIS SELECT

These buttons will drive focus to the MPG or ORIGIN to the selected axis. The mode the pendant is currently in will determine the function of the MPG. Each axis has a LED that will illuminate, and an audible beep, when selected. If not selected, and the JOG rotary selection is changed, the mode will be automatically changed to the last used.

PAUSE

The PAUSE button will pause a loaded GCODE program.

STOP

The STOP button will stop a running GCODE program, MDI command, and a programmed spindle speed