

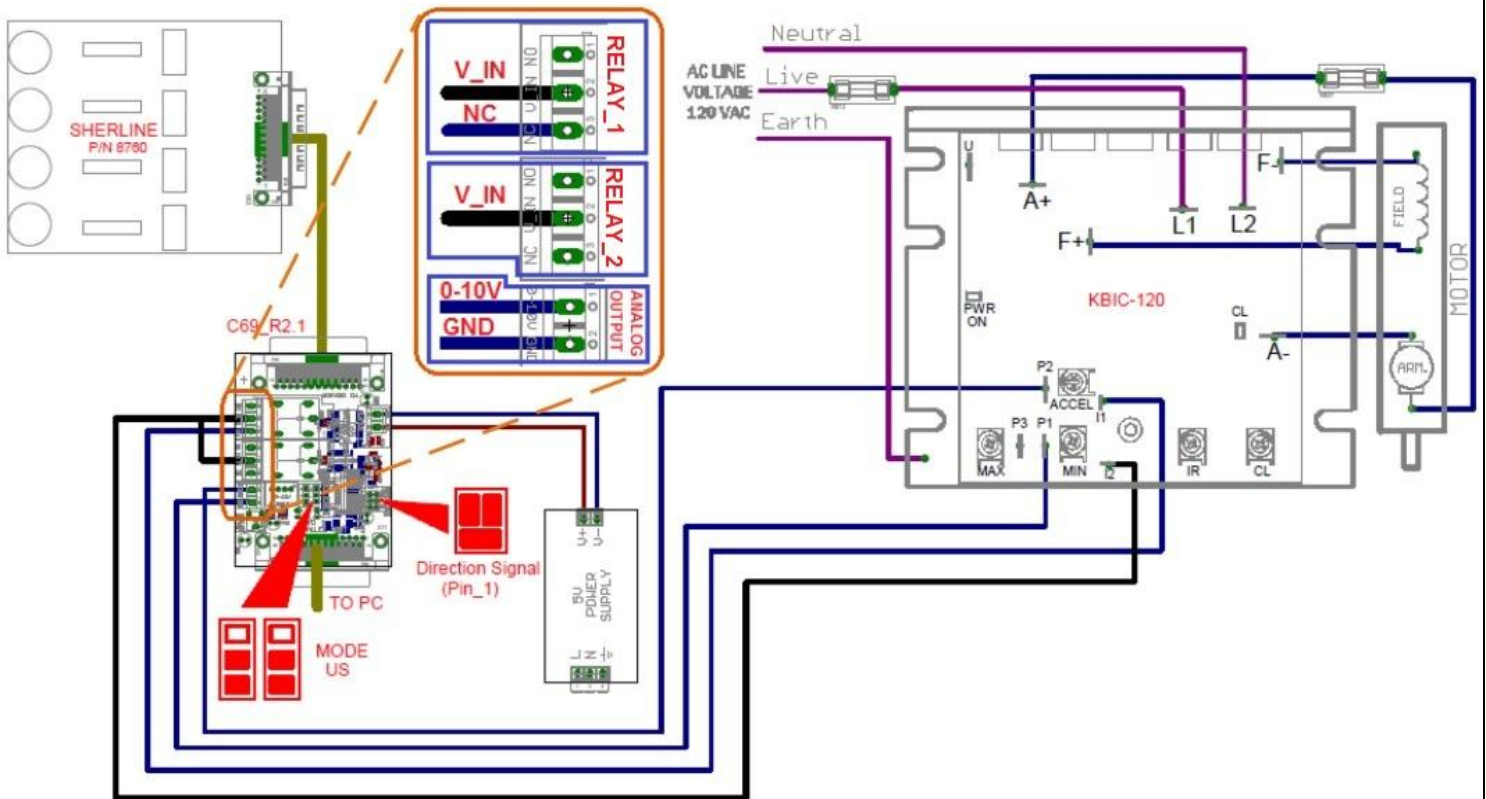
CNC4PC

Integration Solutions for CNC Projects

PRODUCT INTEGRATION INSTRUCTIONS

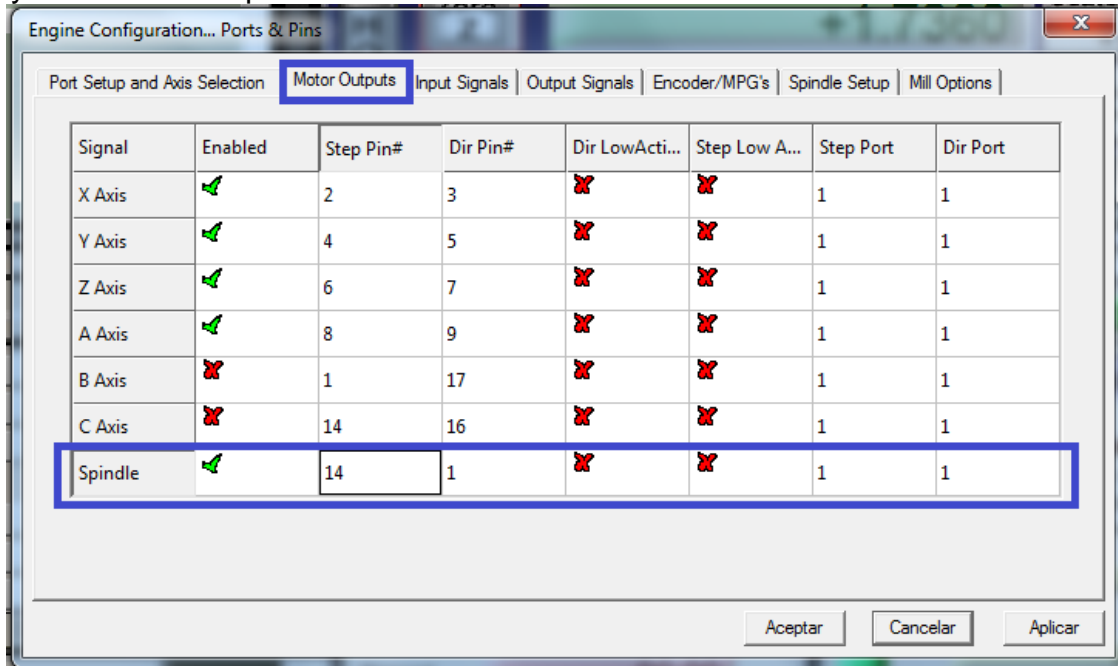
Connection C69 with Sherline AUGUST, 2014

Set the jumper on the C69 for Sherline and KB-120



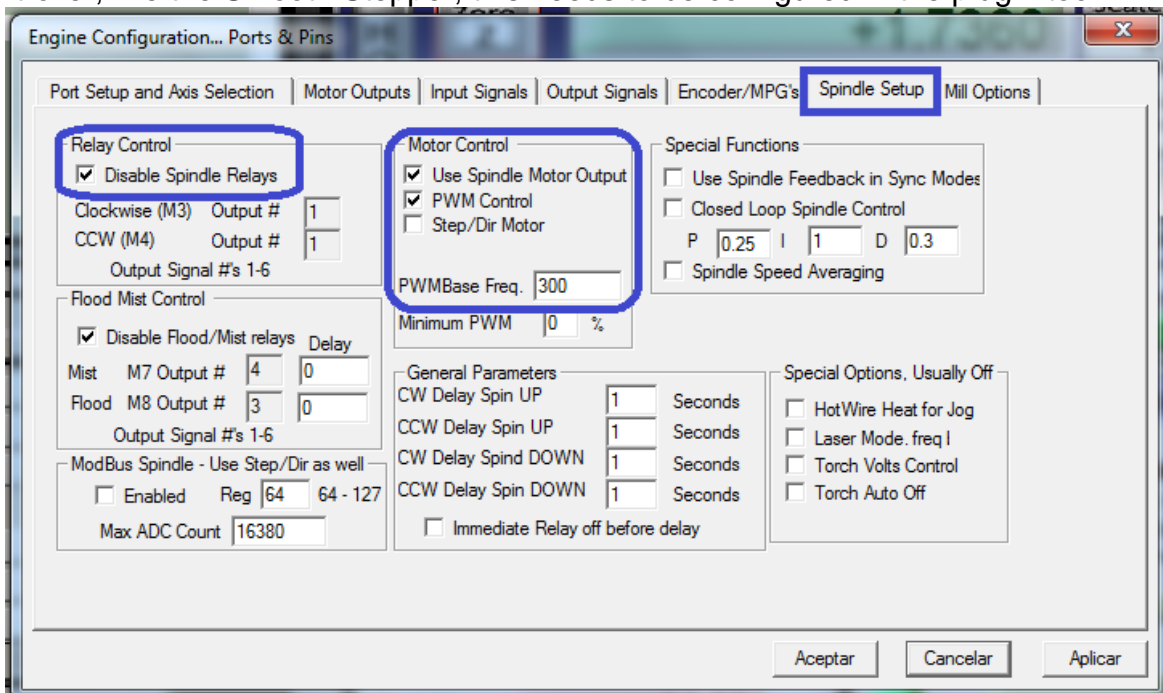
Configuring the Control Software:

Go to Config / Ports&Pins / Motor Outputs. Enable the spindle and select the port and pins you wired for step and direction.



Ports&Pins configuration screenshot

Go to Config / Ports&Pins / Spindle Setup. In the motor control box, check Use Spindle Motor Output and PWM Control with a frequency of 300Hz. If using an external motion controller, like the Smooth Stepper, this needs to be configured in the plugin too.



If used the Smooth Stepper

Go to plugIn control / SmoothStepper v17fd config. Enable PWM and with frequency of 300Hz

Dialog

Controller Frequency: 1 kHz
The Controller Frequency controls how many times per second the velocity is updated when outputting pulses.

Port 2 Pins 2 through 9 Direction: In

Output Mode:
Step and Direction: X, Y, Z, A, B, C (all checked)
Quadrature: (all unchecked)

Noise Filtering:
Noise Filtering of inputs.
An input must be stable for the specified amount of time in microseconds before it will be considered valid.
Values will be assigned to groups of similar signals.
The specified values will be rounded to the nearest multiple of about 1.43 microseconds. To disable filtering for a given groups of inputs, use a value of 0.0 microseconds.

Limits: 0.00
Home: 0.00
Probe: 0.00
EStop: 0.00
Jog: 0.00
Encoders/MPGs: 0.00 (includes A, B, Index, and timing)
Miscellaneous: 0.00 (Miscellaneous covers all other inputs)

Max Step Frequency:
X-axis: 256 kHz
Y-axis: 256 kHz
Z-axis: 256 kHz
A-axis: 256 kHz
B-axis: 256 kHz
C-axis: 256 kHz
Spindle: 32 kHz

Spindle:
 Relay or None
 PWM
Base Hz: 300
 Step and Dir
Pulse Width (us): 0.0
Spindle Index Prescale: 1 (Max of 4096. Set to 1 for no prescale (default))

Watchdog:
If the PlugIn fails to communicate with the device within the amount of time listed below, an EStop will be triggered in the device.
The time is in seconds and is rounded to the nearest tenth of a second. Max value is 3.1 seconds.
2.0

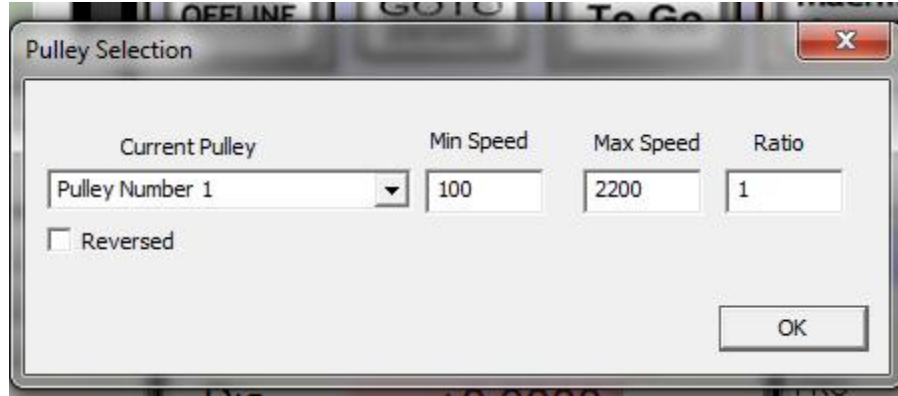
M11Px/M10Px Commands:
 M11Px/M10Px Gates Spindle Output
Output # to use for M11P#/M10P#: 0

Dwell time associated with M11/M10 Commands:
M11:
Dwell selected in this config: Delay: 0 milliseconds
Dwell selected Via User DRO: User DRO #: 0
M10:
Dwell selected in this config: Delay: 0 milliseconds
Dwell selected Via User DRO: User DRO #: 0

Miscellaneous:
 De-Reference Axes in EStop
 Don't Report Port and Pin Warnings
1023 Number of Data Points Mach Should Pre-Calculate

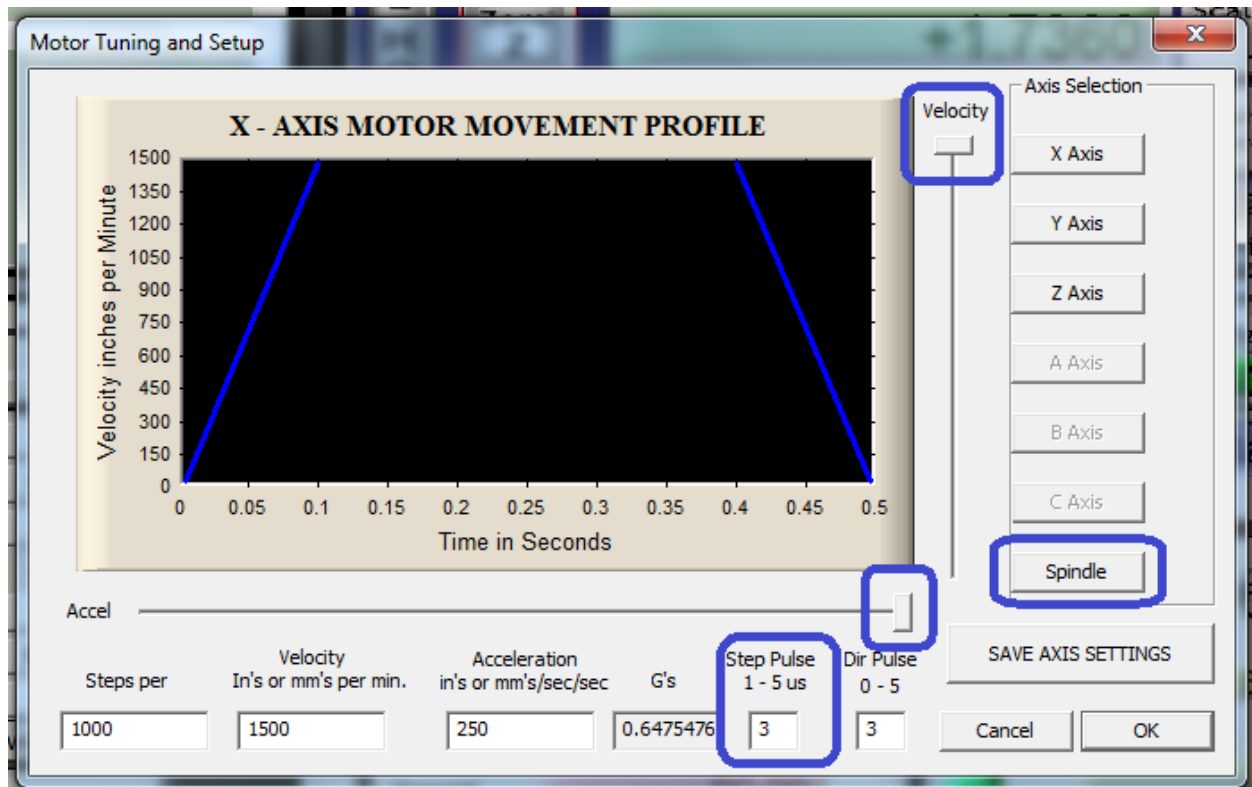
OK
Cancel

Under Pulley Ratios set the pulley ratios of the machine.



Spindle Motor Tuning Setup screenshot

Go to Config / Motor Tuning / Spindle. Set the velocity and acceleration to the max.



Disclaimer:

Use caution. CNC machines can be dangerous machines. Neither DUNCAN USA, LLC nor Arturo Duncan are liable for any accidents resulting from the improper use of these devices. This product is not a fail-safe device and it should not be used in life support systems or in other devices where its failure or possible erratic operation could cause property damage, bodily injury or loss of life.