

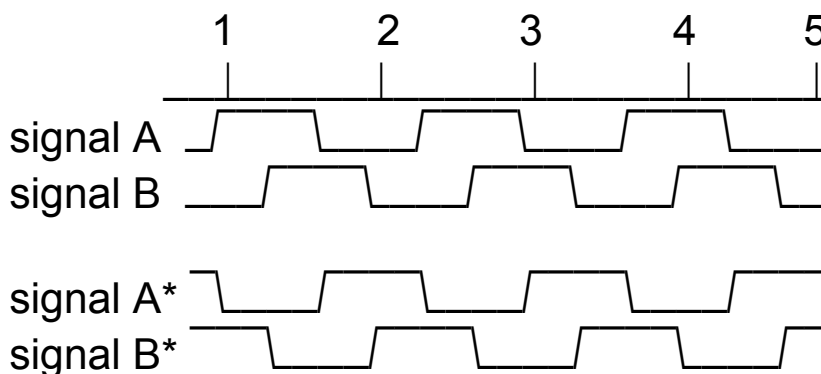
## EN004 - Connecting the PG-01 and PG-02 MPGs to the MC-01 ModIO™

The PG-01 and PG-02 Manual Pulse Generators are functionally identical except that the PG-02 is larger (80mm) as compared with the smaller (60mm) PG-01. The MPGs provide the following features.

- 5Vdc Supply at 100mA
- 100 pulses per revolution (PPR)
- Differential Outputs that can be used with single ended inputs.
- Low profile for easy mounting.

The MPG produces a 90° quadrature phase signal. Shown below is the waveform when rotating the MPG in a clockwise direction. MPG click stops are shown at indicated positions.

The MPG generates a differential output but can be connected to single ended inputs by just using the **A** and **B** outputs.



Signal A leads signal B when the MPG is turned clockwise.  
Signal A\* and B\* are the inverse of A and B respectively.

Connect 1 or 2 MPGs to the ModIO™ as shown below. The MPGs require 5Vdc at approximately 100mA each. The ModIO™ power supply is rated at 5V 1A, so depending on what other devices you have connected, it may be necessary to power the ModIO™ and the MPGs from an external power supply.

When connecting the MPG use the A and B terminals only as the ModIO™ accepts single ended inputs.

Once connected, Mach3 will need to be configured to use the MPG inputs. See the relevant section in the ModIO™ manual for instructions on how to do this.

Once connected the MPG count may be verified via the 4x20 character LCD or via the MPG DROs in Mach3.

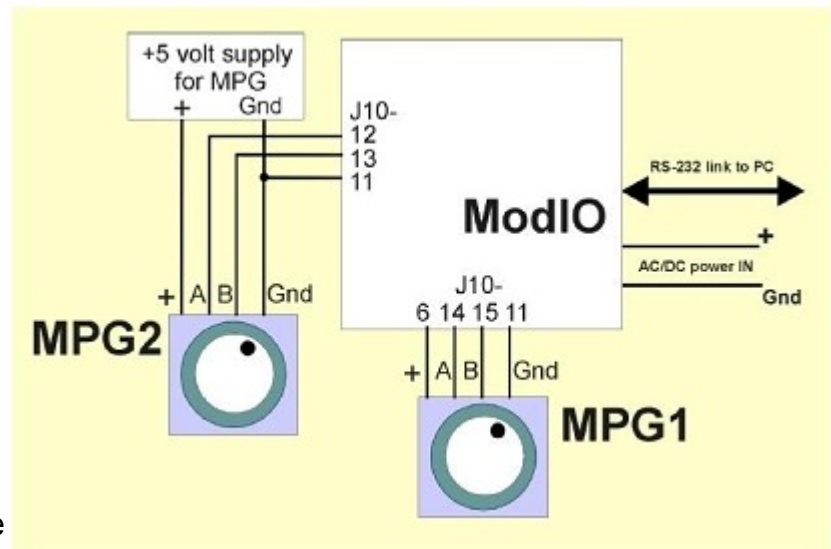


Illustration 1: MPG connection to ModIO™

If when turning the MPG clockwise the MPG count decreases, you will need to reverse the count direction. To do this, swap the A and B MPG inputs to the ModIO™.

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