

The circuit below shows the circuit needed to operate a DC motor (such as our LEGO motors) in two directions.

Control A is used to drive the motor in one direction (yellow), and control B in the other direction (green), as shown in this “truth table”.

A	B	Motor Status
0	0	off
0	1	clockwise
1	0	Counter-clockwise
1	1	off

The LED’s are optional; if used, the appropriate LED will light while the motor is turning.

Controls “A” and “B” are “active low” outputs from the DAQ, which means that you set the value to zero when you want to use it.

The +12V power supply can be adjusted depending on the speed you want. Use +6 or +7 volts for a slower speed; use +12 or +13V for a higher speed. With the LEGO motors, don’t go higher than about +15V.

