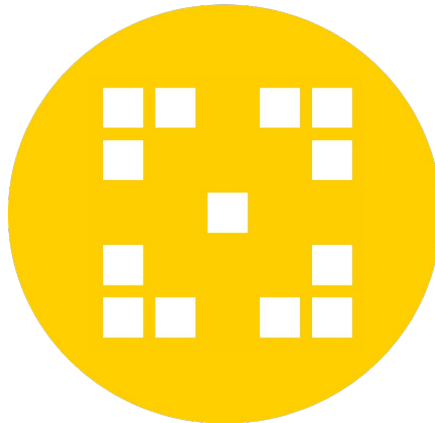# *Unofficial SPIKE Prime Block Guide by PrimeLessons.org*

- Text descriptions based on SPIKE Prime Help Menu, but modified where necessary. Some blocks in the Help are not in the software. Other text in the Help does not match the actual block.
- To download additional programming blocks, click on the icon with blocks and a plus sign at the bottom left of the SPIKE Prime App and add the Extensions.
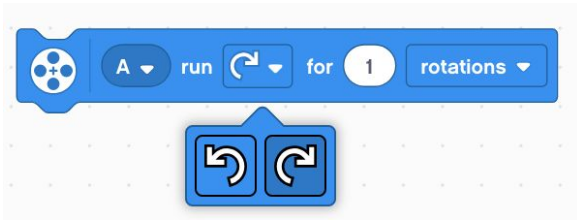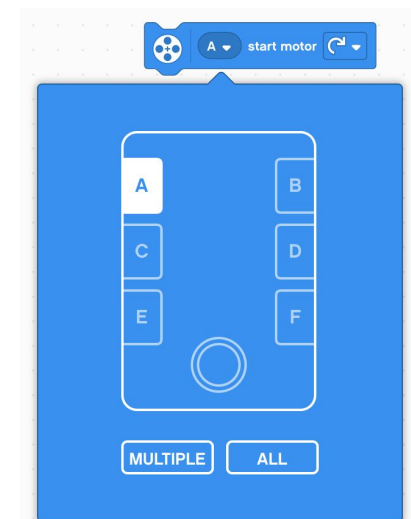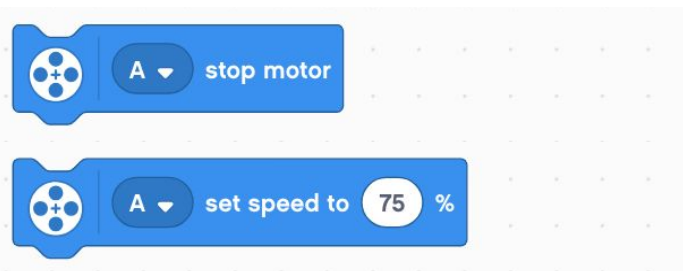
Run Motor for Duration: Tells the motor(s) to run in a clockwise or counterclockwise direction for a number of rotations, seconds or degrees. (Default speed: 75%, and Stall Detection enabled).

Motor Go to Position: Tells the motor(s) to travel the shortest path, clockwise or counterclockwise to the position selected (0-360). (Default speed: 75%, and Stall Detection enabled).
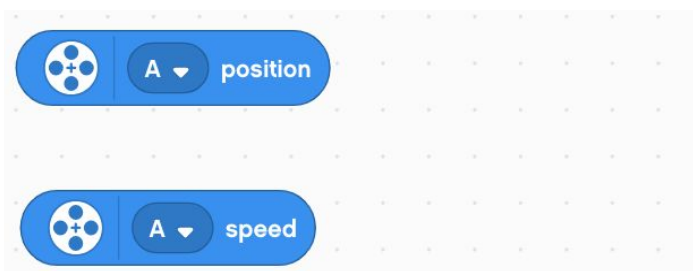
Start Motor: Starts the motor(s) turning in a clockwise or counterclockwise direction. (Default speed: 75%, and Stall Detection enabled).

Stop Motor: Stops the motor(s) selected. The motor will brake, and will not post the position

Set Motor Speed: Sets the speed of the motor(s) to the maximum percentage (-100 to 100). Negative value reverses direction.

Motor Position: Reports the current position of the selected motor (0-359).

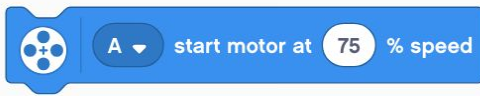**Motor Speed:** Reports the actual current speed of the motor (-100-100).

MORE MOTOR BLOCKS
You will need to add these blocks using Extensions.

Run Motor for Duration at Speed: Runs motor(s) clockwise or counterclockwise for a number of rotations, seconds, or degrees at a specified speed (as a percentage or rpm). Stall detection is enabled.

Start Motor at Speed: Runs motor(s) clockwise or counterclockwise forever at the specified speed (percentage or rpm). Stall detection is enabled.

Go to Relative Position at Speed: Runs motor(s) to a relative position at the specified speed (%). Stall detection is enabled.
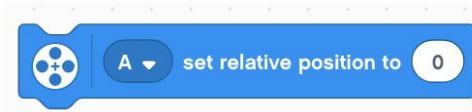
Set Relative Motor Position to 0: Sets the relative position of selected motor(s) to a specified value. "0" resets the relative position.
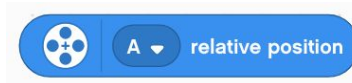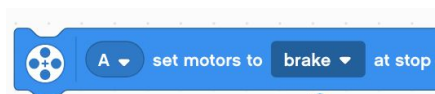
Relative Motor Position: Reruns the number of degrees the motor has turned since the program started or was reset to 0.
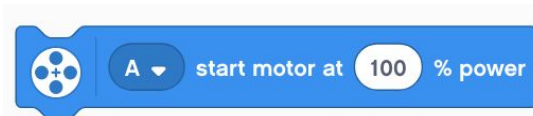
Start Motor with Power: Runs motor(s) at specified percentage of power forever. Stall detection enabled.
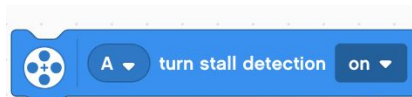
Motor Power: Returns the power level being used on a specified motor (in %)

Stop and Coast Motors: Defines how the motor with stop. Brake (default method applied friction to the motor). Hold (uses power to brake and moves moto back to the position it was stopped at). Coast (the power to the motr is cut when stopping)

Turn Stall Detection On/Off. Use this to disable Stall detection on motor and movement blocks. If stall detection is off, the motor will keep trying to complete even when physically prevented. If on, the code will move on to the next block.
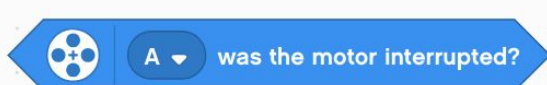
Was Movement Interrupted? If a motor block with a specified duration did not complete, it was interrupted.