FIRST LEGO LEAGUE CHALLENGE

Programming Skills Quick Guide

FIRST LEGO LEAGUE TUTORIALS

Move Until Black

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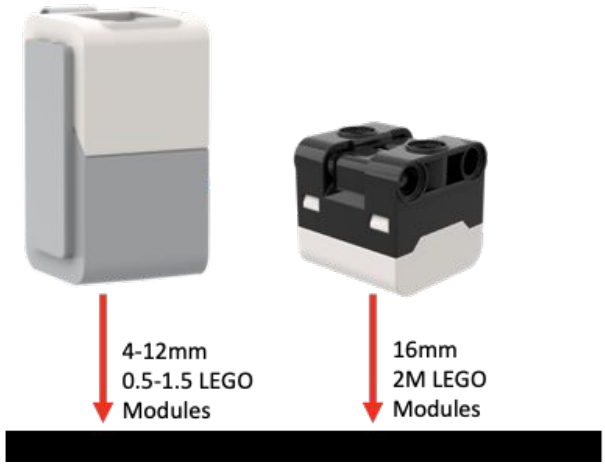
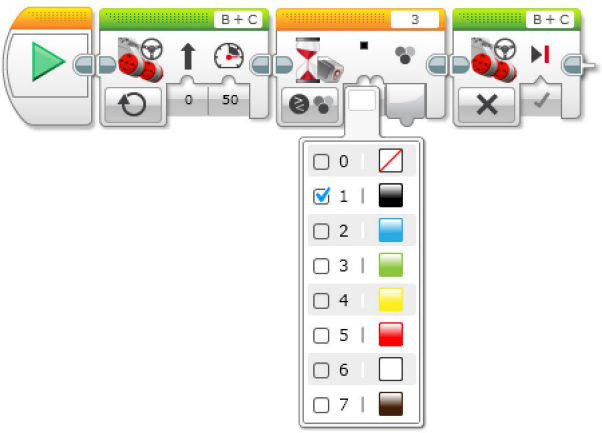
BY DROIDS ROBOTICS

- ***Objective:*** *Program your robot to move straight until the color sensor sees black*
- Make sure you check the height of your color sensor before you begin
- Use a line on the *FIRST* LEGO League challenge mat or create one using black electrical tape on a white paper.
- Line up your robot as far away from the black line as you want and see if you can make it stop on the line.



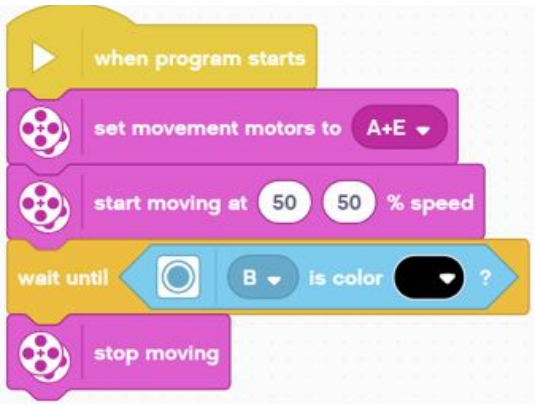
EV3-Lab

- Start motors
- Use the Wait For block in color mode to detect when the color sensor sees black
- Stop Motors



SPIKE Prime

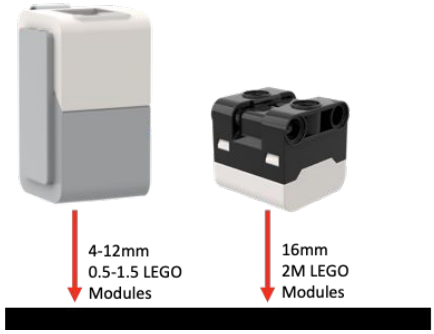
- Set the movement motors for your robot
- Start moving straight at % speed
- Use the wait until block to detect when the color sensor sees black
- Stop moving



Learn more: FLLTutorials.com, PrimeLessons.com, EV3Lessons.com

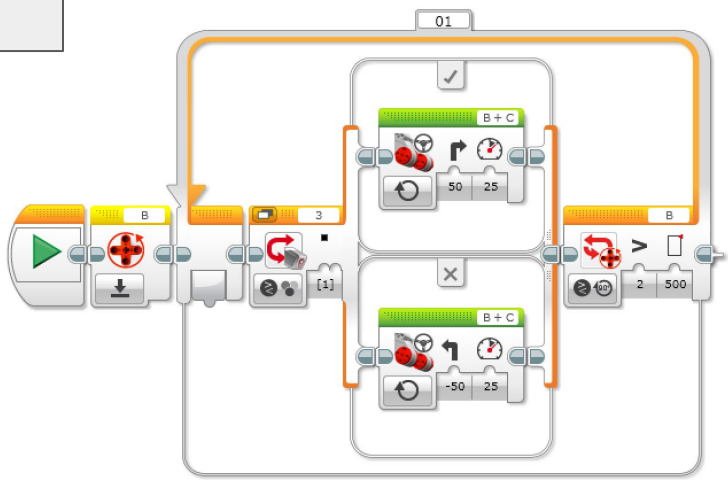
Line Follow for Distance

- ***Objective:*** *Program your robot to follow a line for a specified distance (500 degrees).*
- Note that robot line followers follow the edge of the line (not the middle).
- Make sure you check the height of your color sensor before you begin
- Use a line on the *FIRST* LEGO League challenge mat or create one using black electrical tape on a white paper.
- Make sure your color sensor starts on the correct side of the line to match your code (the examples below follow the right side).



EV3-Lab

- Reset movement motor (B)
- Turn Right if color sensor sees black
- Turn Left if it does not see Black
- Repeat until motor (B) is greater than 500 degrees



SPIKE Prime

- Reset movement motor to “0” (A)
- Set movement motors (A+E)
- Turn Right if color sensor sees Black
- Turn Left if it does not see Black
- Repeat until relative position of the motor (A) is greater than 500