

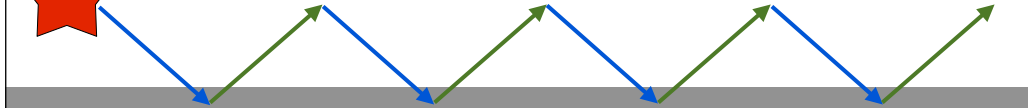


## LINE FOLLOWING

**RoboJackets**



# Theory of Operation



## Motor Actions

turn	turn	turn	turn	turn	turn	turn	turn
RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT	RIGHT	LEFT

## Light sensor

dark	light	dark	light	dark	light	dark
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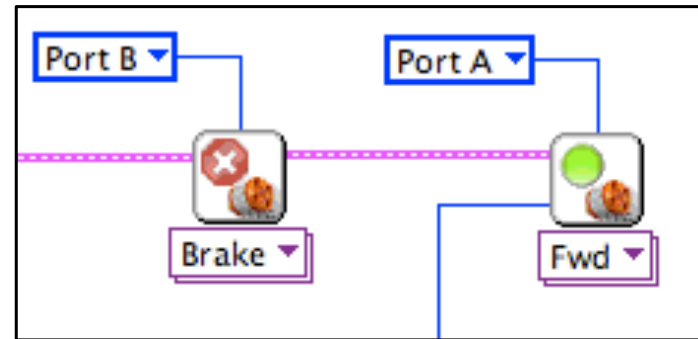
## How Do We Do This?

1. If the light sensor is “light”
  - Turn Right
2. Else if the light sensor is “dark”
  - Turn Left



# Turning

The left motor is A and the right motor is B

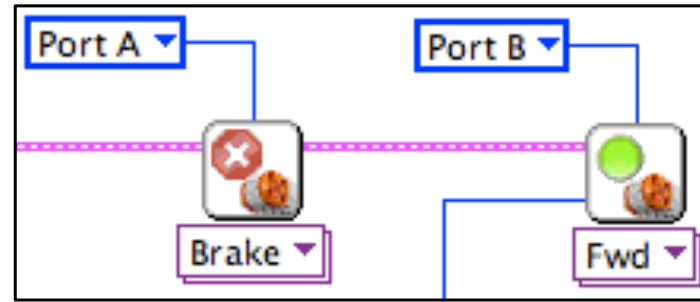


Which way does this turn?



# Turning

The left motor is A and the right motor is B



Which way does this turn?



# What does “dark” mean?

Do an experiment  
in LabVIEW

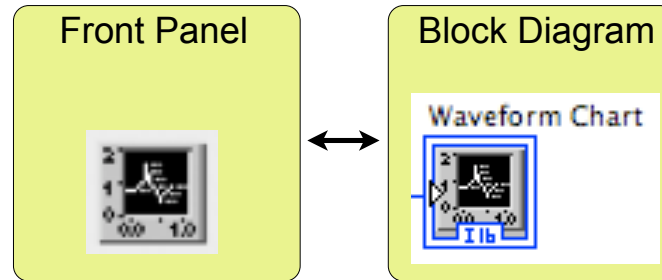


# What does “dark” mean?

The screenshot shows a software interface with a 'Waveform Chart' window and a 'Controls' menu. The 'Waveform Chart' window has a title bar 'Waveform Chart' and a sub-title 'Plot 0'. The chart area is mostly black, with a small 'Waveform Chart' icon in the center. The y-axis is labeled 'Amplitude' and ranges from -10 to 10. The x-axis is labeled 'Time' and ranges from 0 to 100. The 'Controls' menu is open, showing a search bar and a 'View' dropdown. The menu items are: Numeric, Boolean, Array & Cluster, Ring & Enum, Graph (expanded), Decorations, String & Path, NXT Refnum, Motor Configurations, and Select a Control... The 'Graph' category is expanded, showing two graph icons.



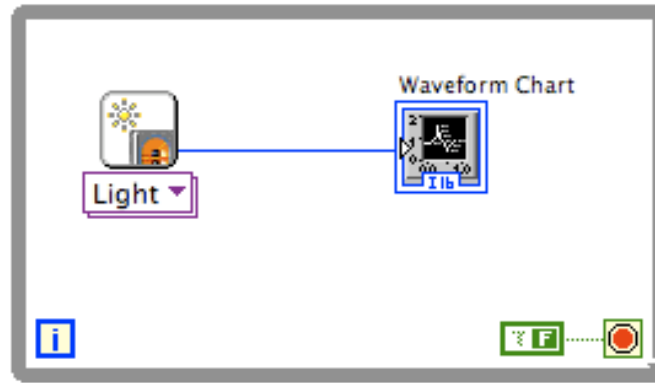
# What does “dark” mean?







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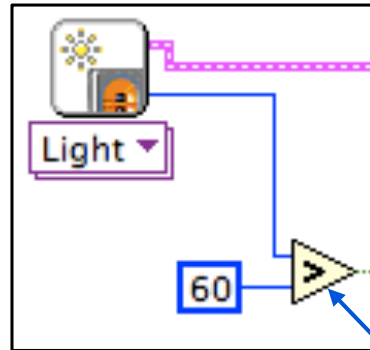


## What does “dark” mean?

Lots of Noise  
pick a threshold



# Thresholding

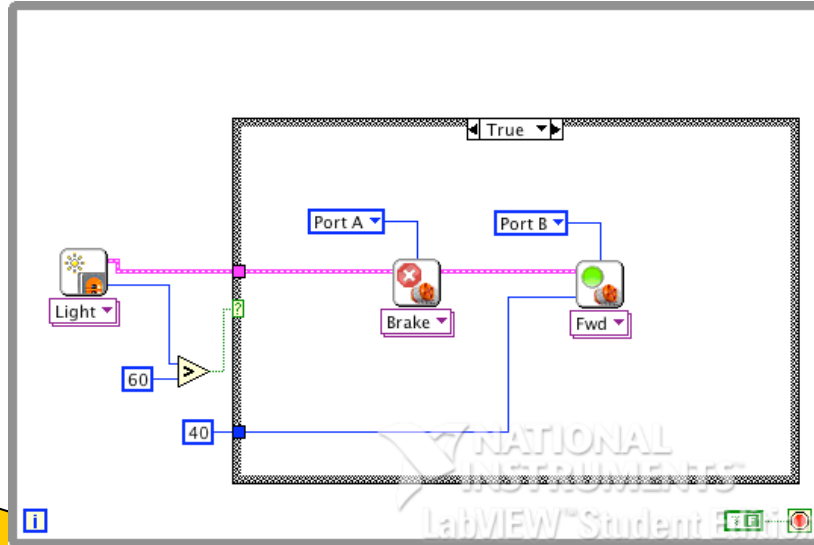


If the light is  
**greater than 60**  
Emit **true**

Greater than



# Putting it all Together





# Putting it all Together

