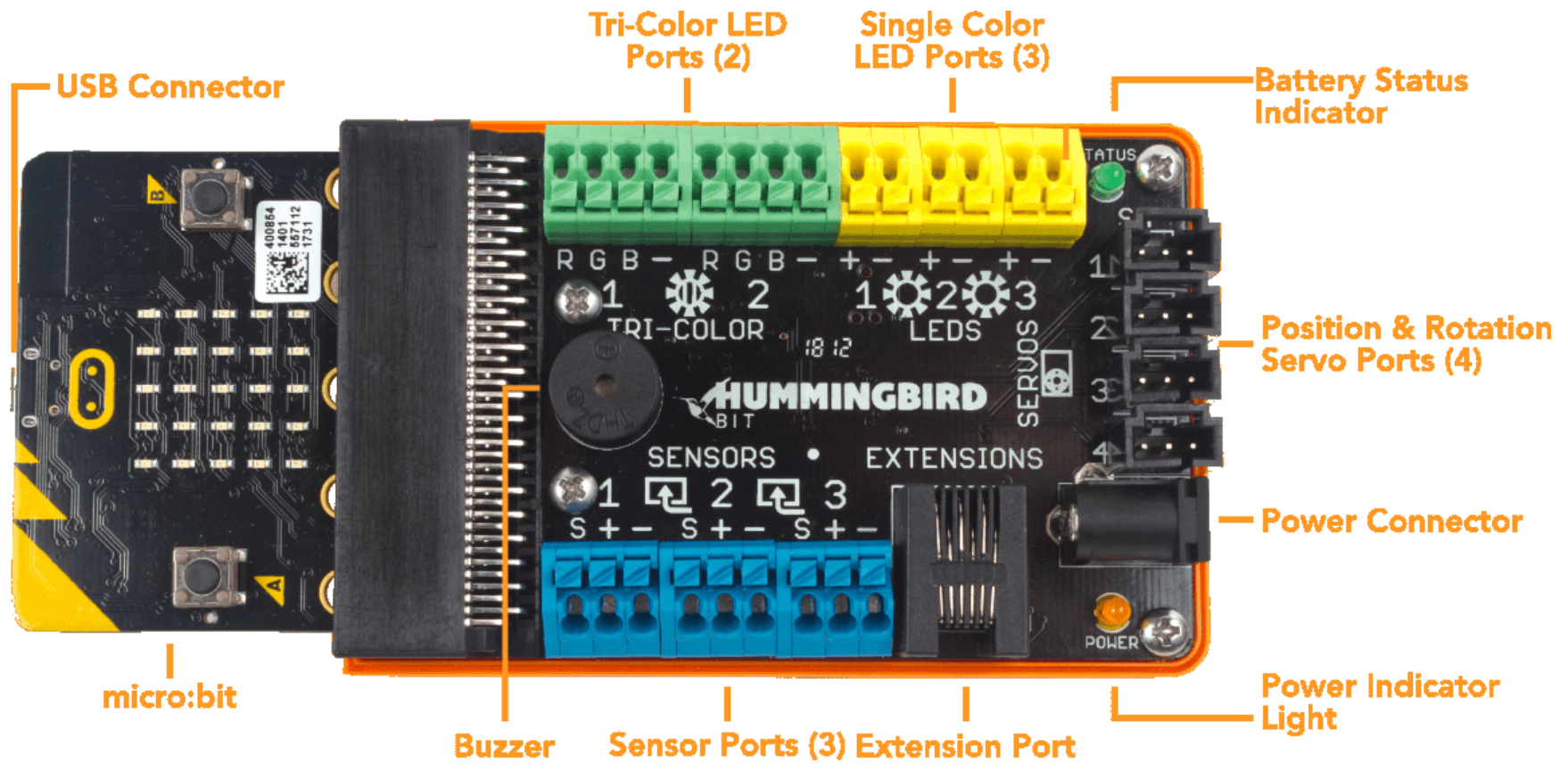

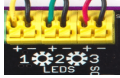


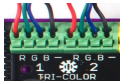









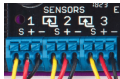


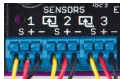









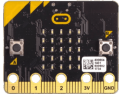
# ANATOMY OF THE HUMMINGBIRD™

ROBOTICS KIT



# Hummingbird Bit Component Guide

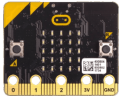
Component	What Does It Do?	Plug It In	Icon
<b>Outputs</b>			
 <p><b>Single Color LED</b></p>	Program the brightness of the light	Color: + (Positive) Black: - (Ground)	 
 <p><b>Tri-Color LED</b></p>	Program the color of the light	Red: R (Red) Green: G (Green) Blue: B (Blue) Black: - (Ground)	 
 <p><b>Position Servo</b></p>	Program the angle of the motor from 0° to 180°	White: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p><b>Rotation Servo</b></p>	Program the speed of rotation	White: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p><b>Buzzer</b></p>	Program different musical tones	micro:bit accessory	
<b>Inputs</b>			
 <p><b>Distance Sensor</b></p>	Measure the distance to the closest object	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p><b>Light Sensor</b></p>	Measure the light around the robot	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p><b>Dial Sensor</b></p>	Measure how much the knob is turned	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p><b>Sound Sensor</b></p>	Measure the sound around the robot	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 



**Compass**

Measure magnetic field strength

micro:bit accessory



**Accelerometer**

Measure the robot's position in space

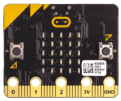
micro:bit accessory



**A/B Button**

Use buttons to get input

micro:bit accessory




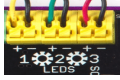


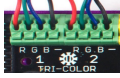





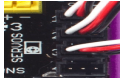



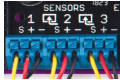


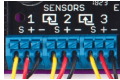


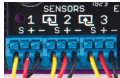


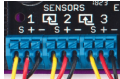

**Radio**

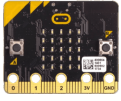
Send and receive messages

micro:bit accessory

# Hummingbird Bit Component Guide

Fill in the blanks below.

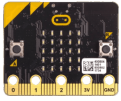
Component	What Does It Do?	Plug It In	Icon
<b>Outputs</b>			
 <p>Single Color LED</p>	<input type="text"/>	Color: + (Positive) Black: - (Ground)	 
 <p>Tri-Color LED</p>	<input type="text"/>	Red: R (Red) Green: G (Green) Blue: B (Blue) Black: - (Ground)	 
 <p>Position Servo</p>	<input type="text"/>	White: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p>Rotation Servo</p>	<input type="text"/>	White: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p>Buzzer</p>	<input type="text"/>	micro:bit accessory	
<b>Inputs</b>			
 <p>Distance Sensor</p>	<input type="text"/>	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p>Light Sensor</p>	<input type="text"/>	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p>Dial Sensor</p>	<input type="text"/>	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 
 <p>Sound Sensor</p>	<input type="text"/>	Yellow: S (Signal) Red: + (Positive) Black: - (Ground)	 



Compass

micro:bit accessory

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Accelerometer

micro:bit accessory

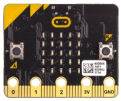
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A/B Button

micro:bit accessory

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Radio

micro:bit accessory