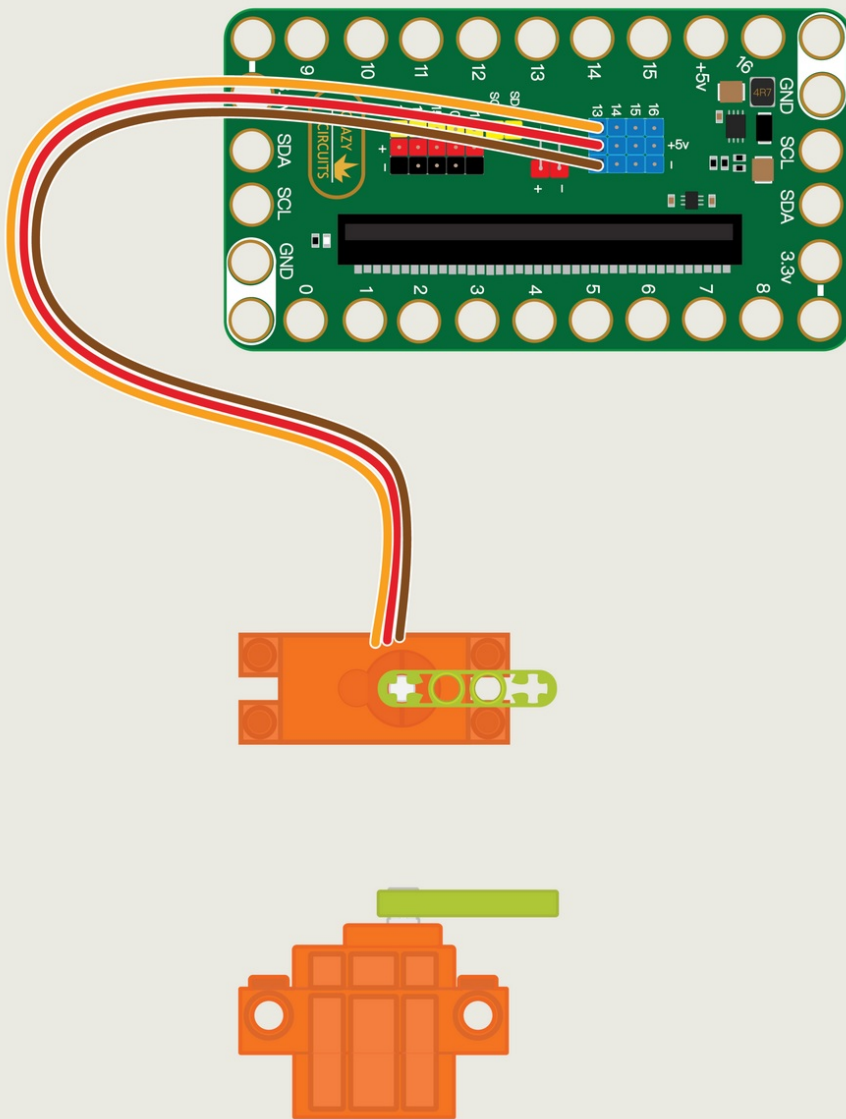




CH27-D - 360 Servo Function

Connect a 360° Servo to a Bit Board and control it with code.

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INTRODUCTION

Connect a 360° Servo to a Bit Board and control it with code.

We'll explore code to control the movement of a continuous rotation (360 degree) servo motor.



TOOLS:

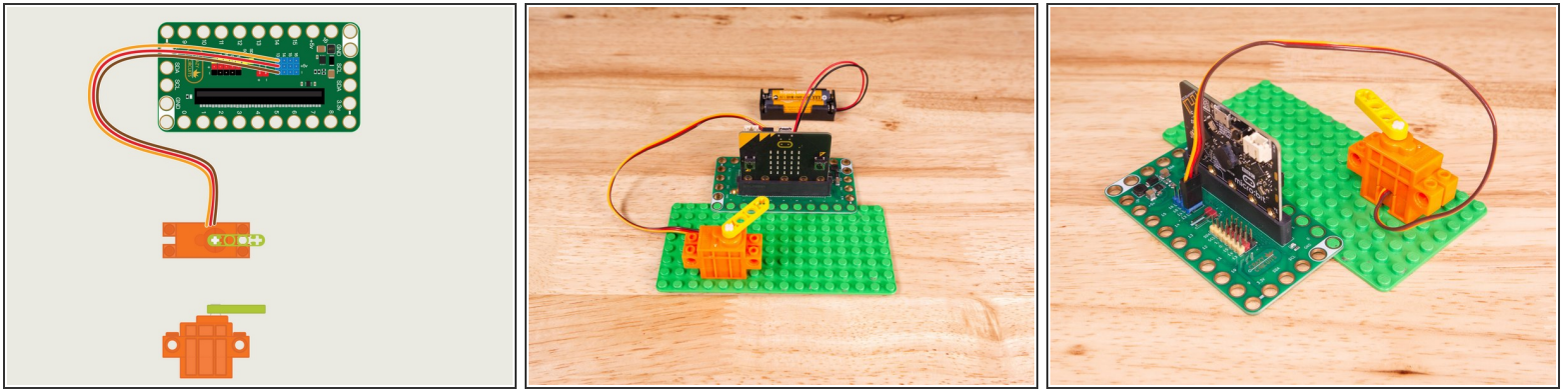
- [Computer](#) (1)



PARTS:

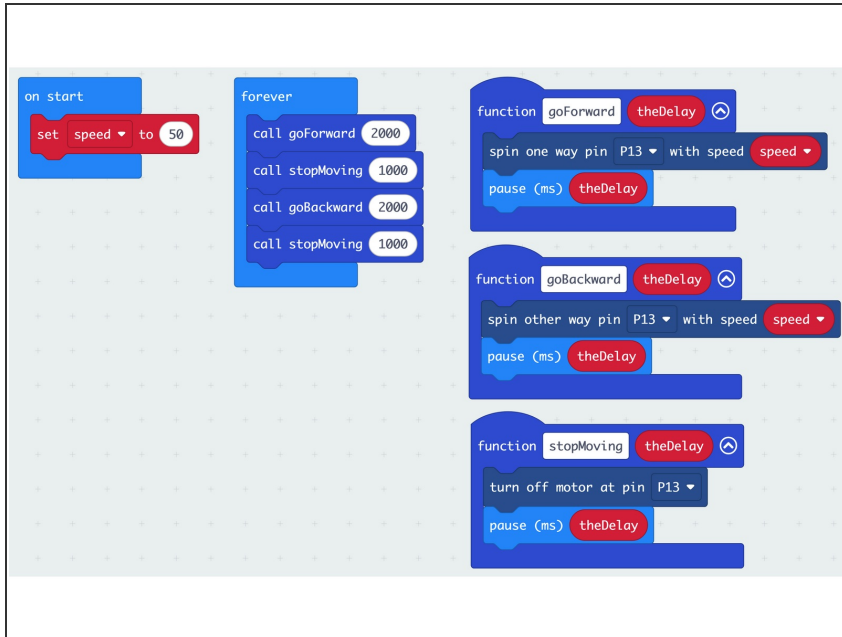
- [Crazy Circuits Bit Board](#) (1)
- [micro:bit](#) (1)
- [Brick Compatible 360 Degree Servo](#) (1)

Step 1 — Connect the 360° Servo



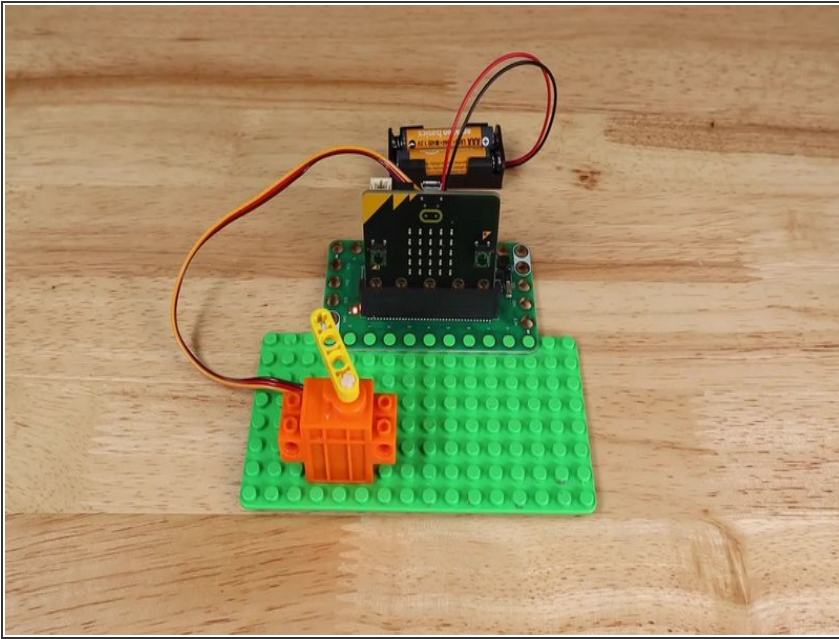
- The **360 Degree Servo Motor** has a 3-wire connector on the end that can plug directly into the pins on the back of the Bit Board.
- Make sure the **Orange Wire** is closest to the number **13** for the **Pin 13** column.
- Then the **Brown Wire** should be closest to the micro:bit (in the - row) and the **Red Wire** will be in the middle (the **+5v** row).
- ☑ A 360 Degree Servo is also called a "Continuous Rotation Servo" because it can **spin around continuously** without the hard stops that a 270 Degree Servo has.

Step 2 — Load the Code



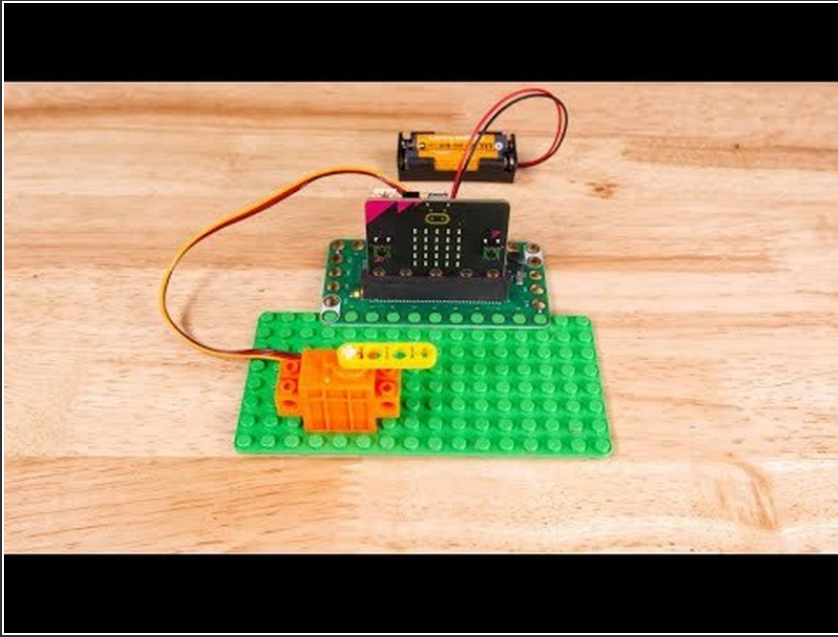
- If you've never used a micro:bit before you'll want to check out this guide: [Bit Board V2 Setup and Use](#)
- We're going to load the following code for our **360 Servo Function** program:
https://makecode.microbit.org/_9icMywi2F...
- We've created three functions, goForward, goBackward, and stopMoving.
- We're passing a **parameter** (**theDelay**) when we call the function which tells the function to run for a specified amount of time.
- The result of using the functions is a simple and clearly labeled set of instructions in our main forever loop.
- ☑ If this code looks familiar, it's basically what we use for our [Bit Board Rover](#), which features two 360° servos used to move the Rover around.

Step 3 — Test it Out!



- Once the code is loaded it should start running immediately.
- ❗ You can power the micro:bit via the USB cable you used to load the code, but now that we are using servos we recommend using a battery pack plugged into the Bit Board.
- ★ The [Blue Pins](#) on the Bit Board provide extra power (5 volts instead of 3 volts) by **boosting the voltage** coming from the battery pack. This helps improve servo performance, especially with multiple servos.
- The servo will spin one direction for two seconds, then stop for one second, then spin the opposite direction for two seconds, and stop again for one second.

Step 4 — Follow Along



- Follow along with our recorded Live Stream!

- ① You can watch the full video of us walking through this project, along with explaining and exploring the code:

<https://youtube.com/live/6SM5-RuBkuY>