The Robot Program Episode 008: Building Six

This lesson will demonstrate how to build the Revolution Six robot. Follow along with The Robot Program Episode 008: Building Six. At the end of this lesson, the reader will have learned how to download the EZ-Builder software, where to access the step-by-step building instructions, how to Clip'n'Play the EZ-Bit robot components, and how to secure the connections to the EZ-B Robot Controller for fully building Six.

View the video episode here: https://www.ez-robot.com/Tutorials/Lesson/62

Last Updated: 5/29/2018

⑤ Professor E's Overview

This episode demonstrated how to build the **Revolution Six** robot.

The **EZ-Builder** software can be downloaded from www.ez-robot.com.

Always start with a fully charged robot. Remember to disconnect the wires carefully.

Within the software, follow along with the step-by-step building instructions.

The robot components are called **EZ-Bits**. Each **EZ-Bit** connects to the **EZ-B Robot Controller** using male-to-female connections at the back of the robot. The port layout can be viewed in the **Getting Started Guide**. Be sure to match the wire colors to the corresponding port colors.

Adjust the cables so that they are coming out of the back of each **EZ-Bit**, which will make the connections easier to organize. Use **Wire Wraps** to clean up the cables into bundled sections, allowing the robot to have full range of motion. Check that the cables are not pinched by the **Hexapod Dome** and that the robot is evenly balanced.

ⓈStep 1

Download **EZ-Builder** from www.ez-robot.com.
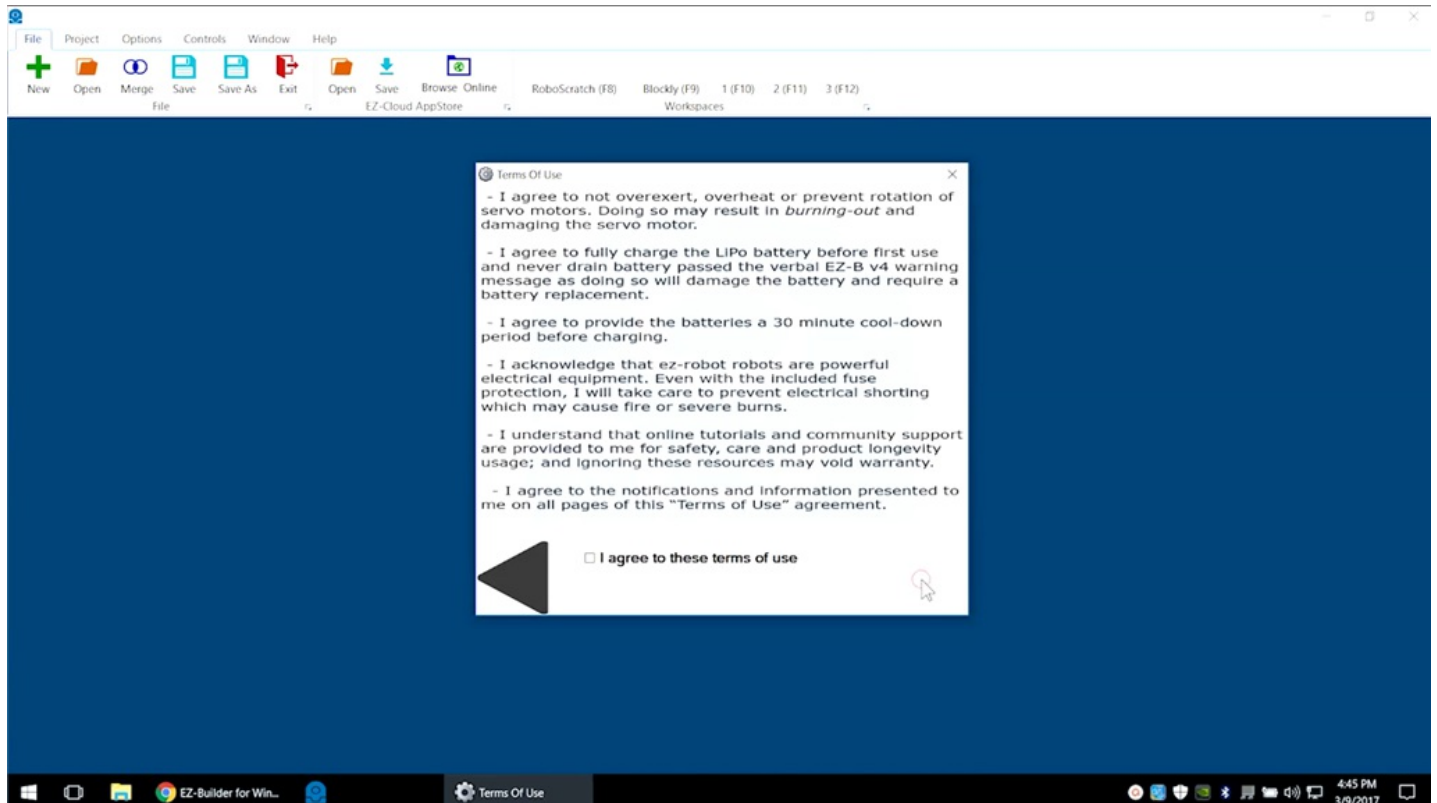
Ⓢ Step 2

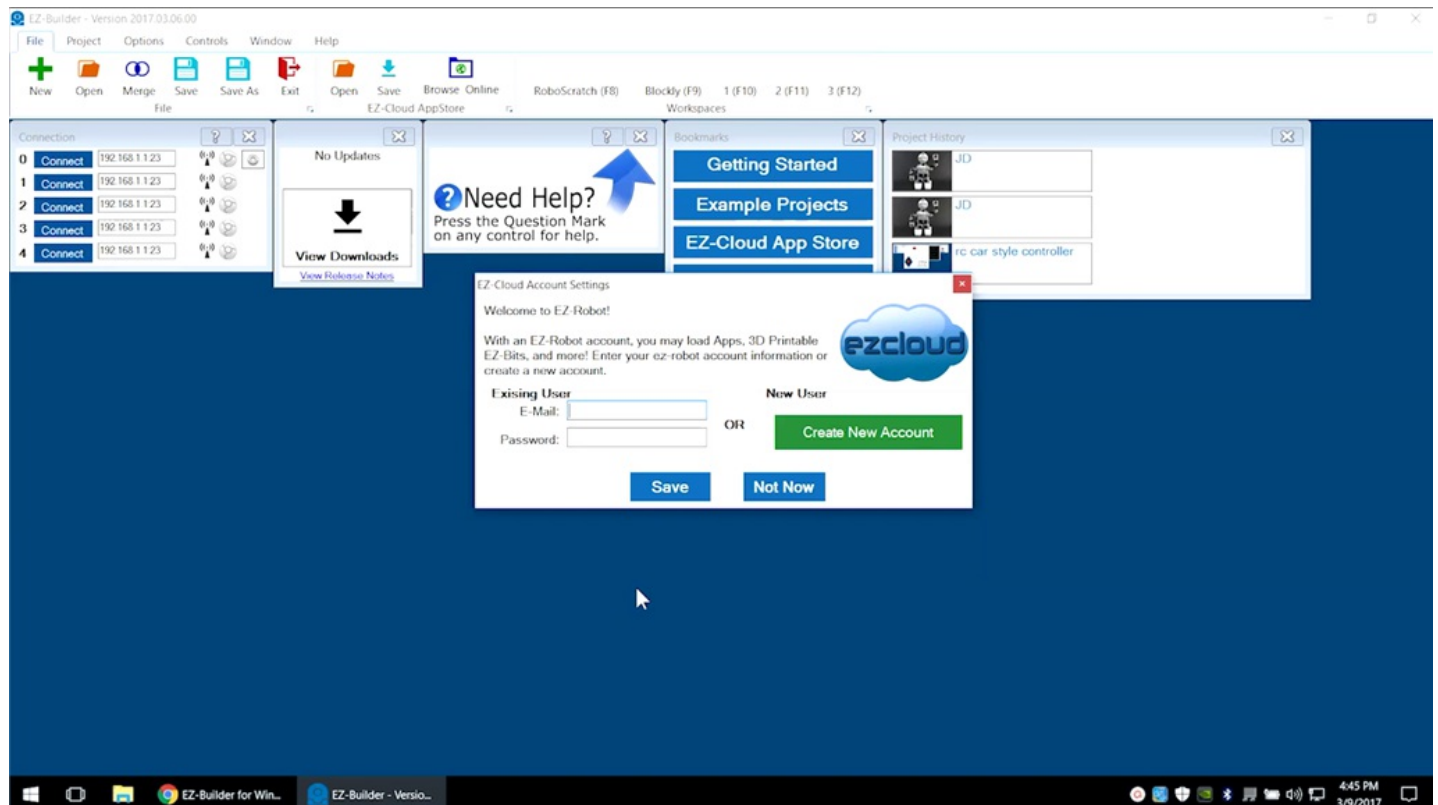Double-click to begin installation. Choose **Typical** as the install type.
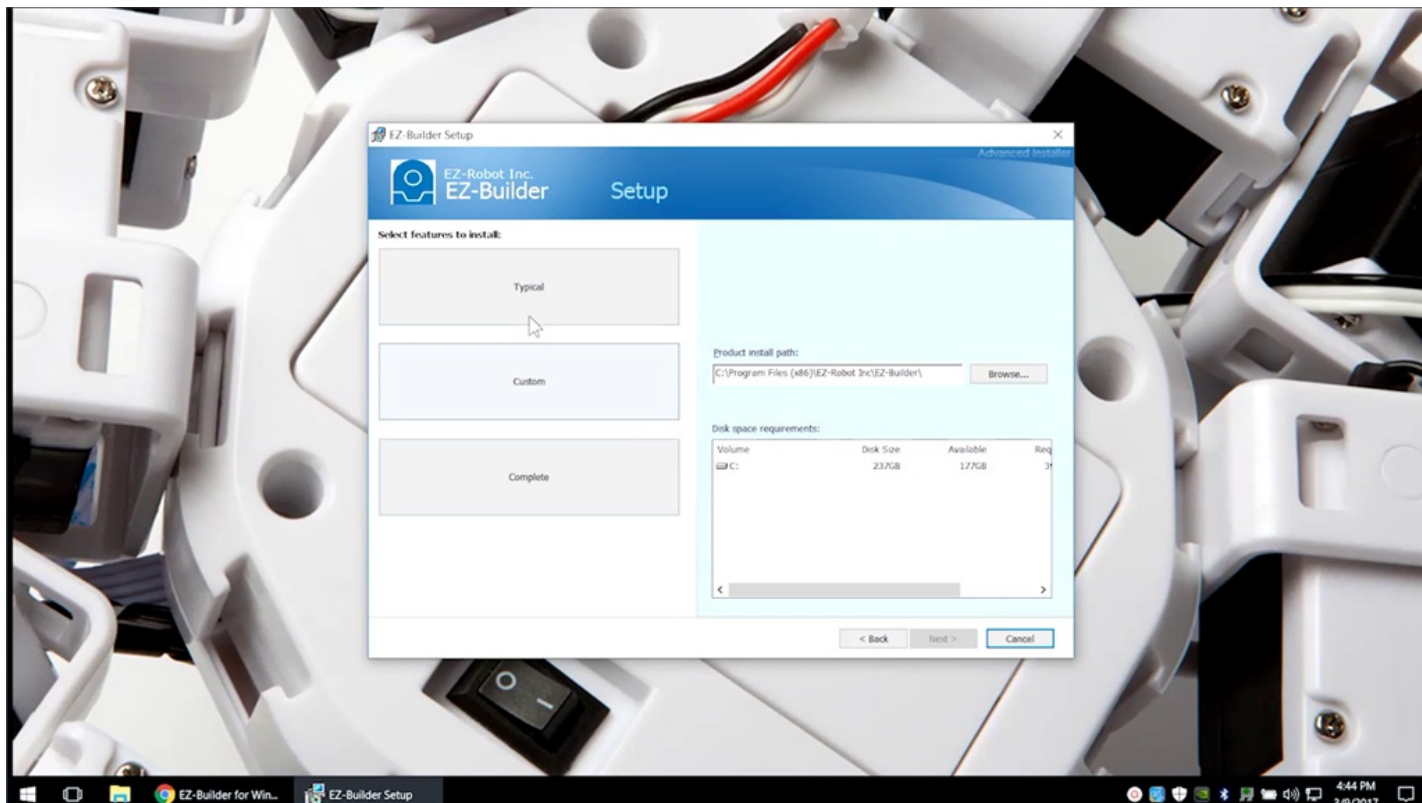
ⓈStep 3

Read and agree to the **Terms of Use**.

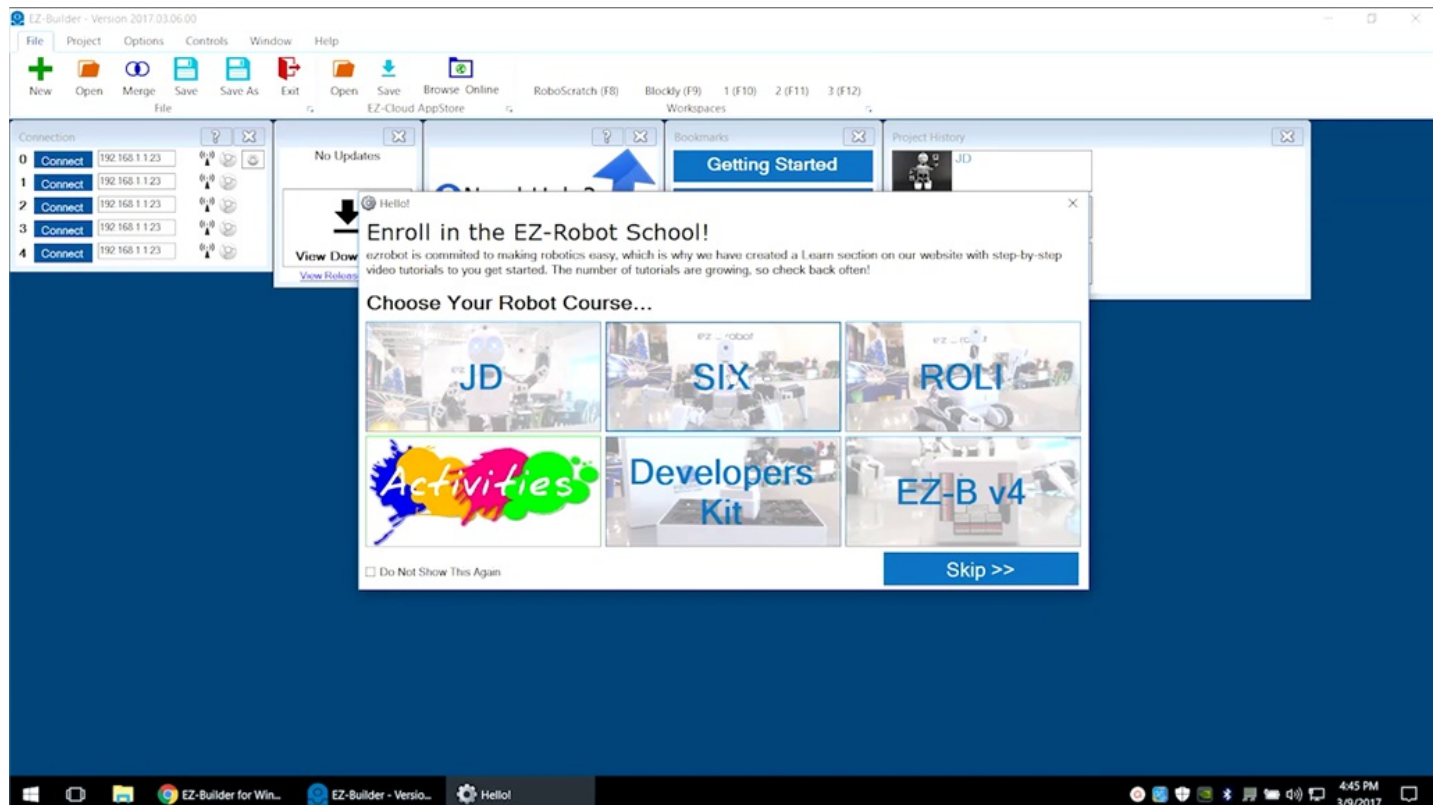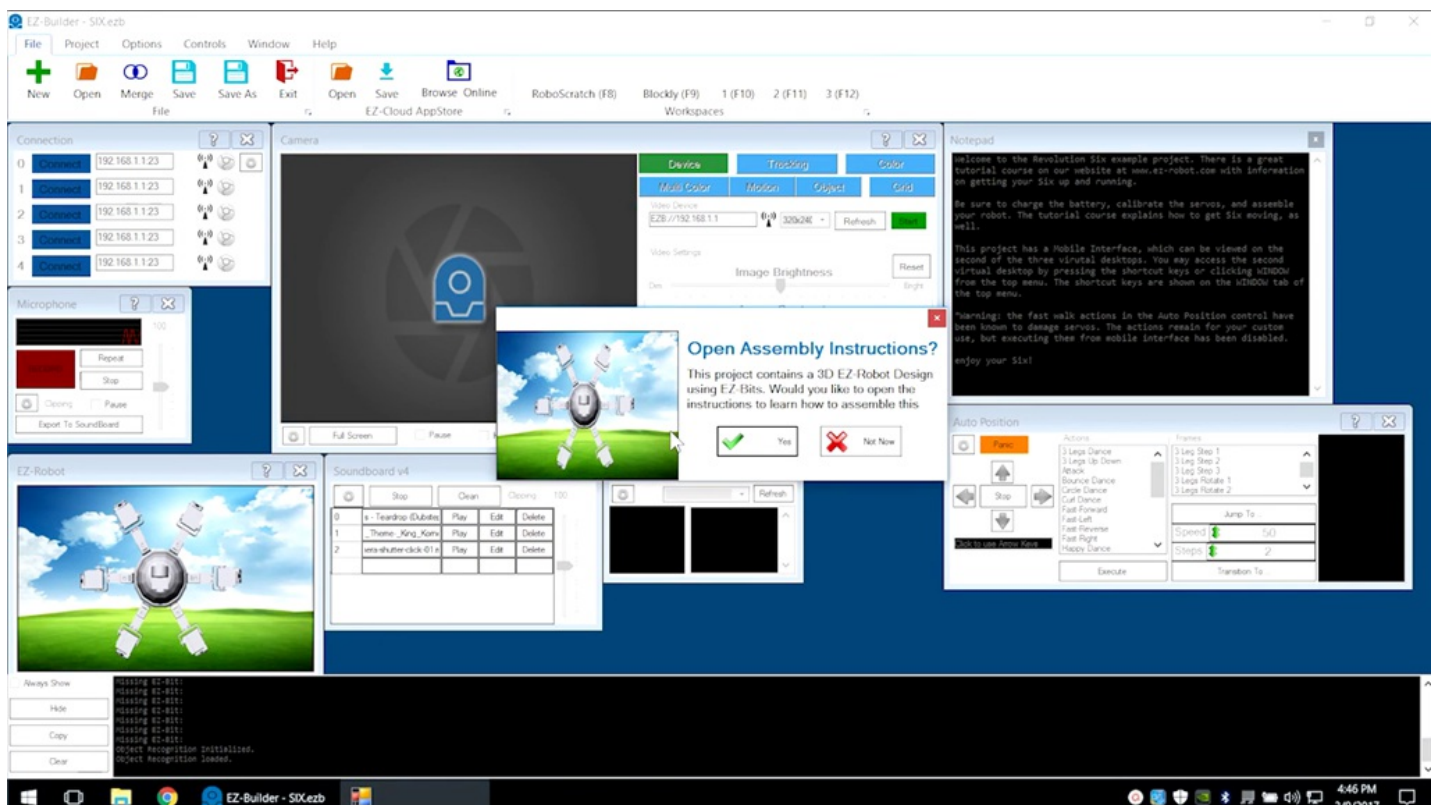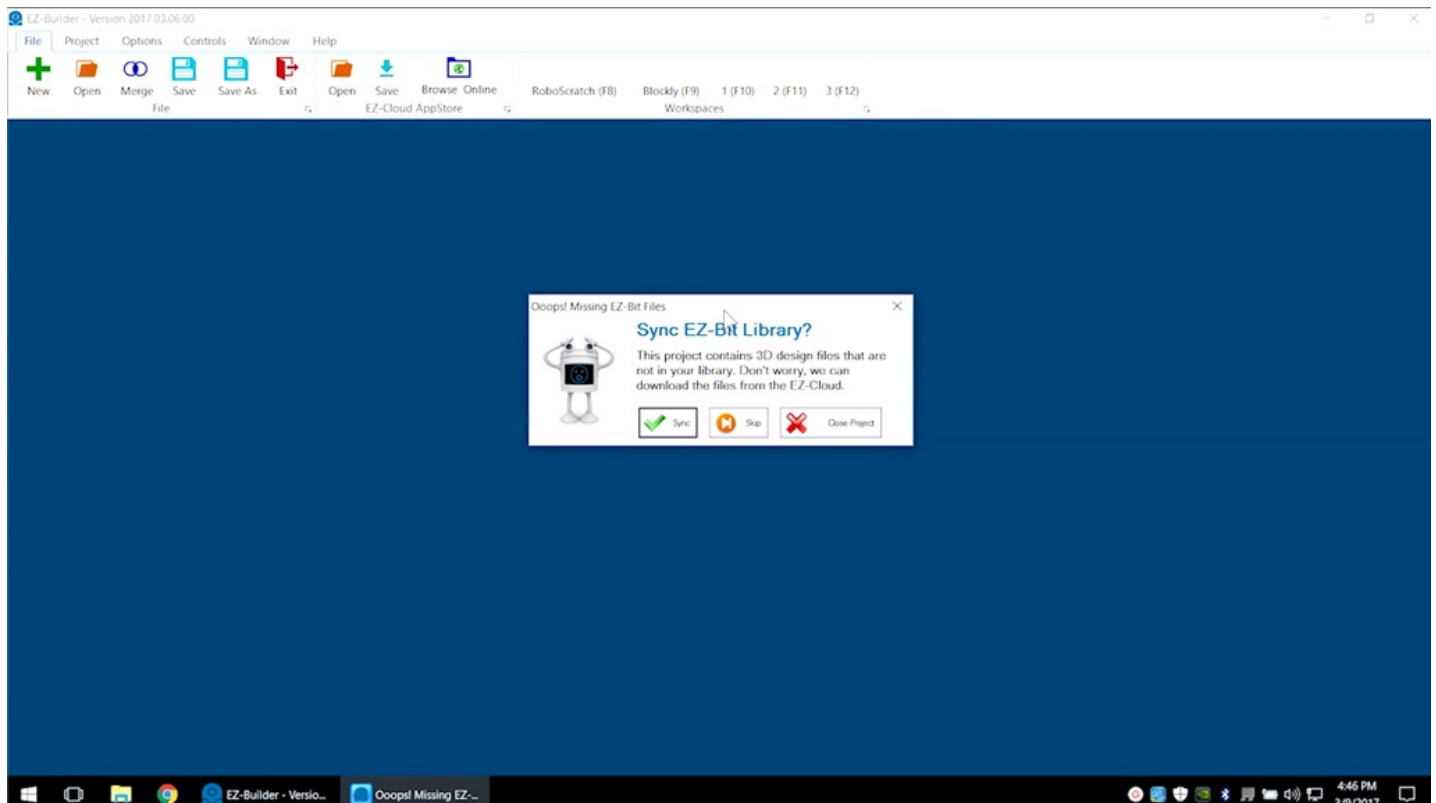# ⓢ Step 4

Login or create an **EZ-Cloud** account.

Find tutorials about **Revolution Six** at the **EZ-Robot School**.

EZ-Bits are robot parts. Sync to update the library, and select **Yes** to view build instructions.

Always charge the battery before using **Six**.
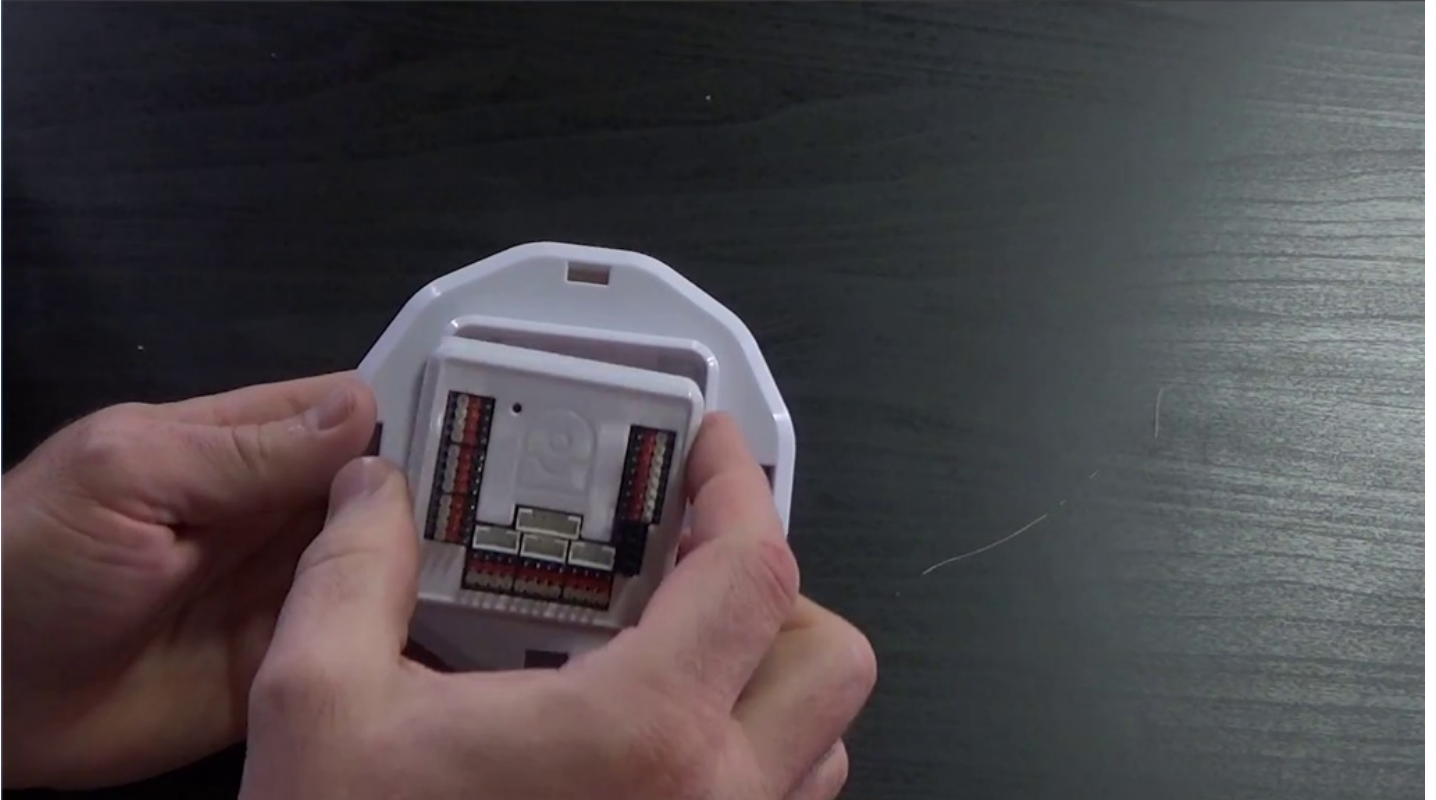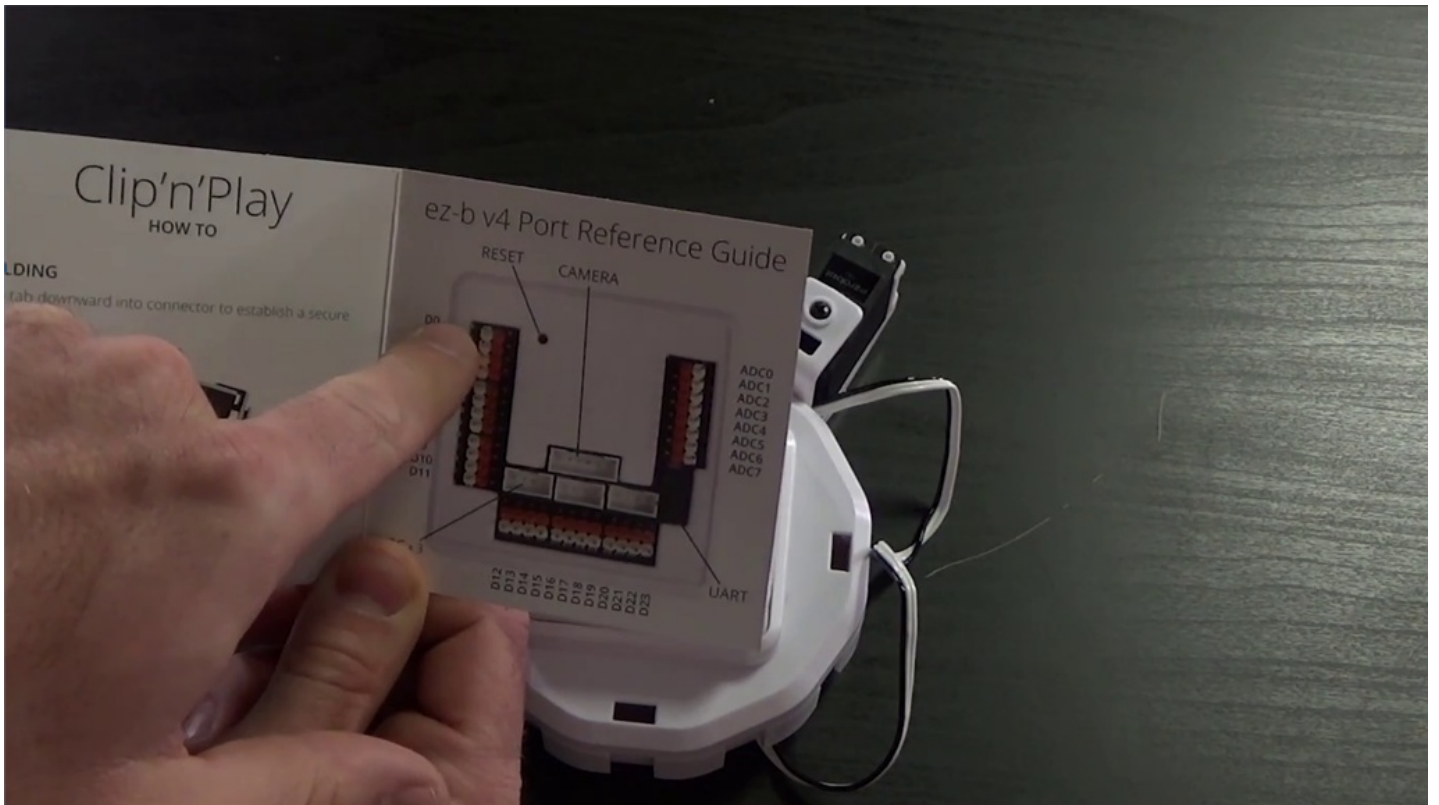
Step 8

Insert **EZ-B** into the **Dodecagon Body**.
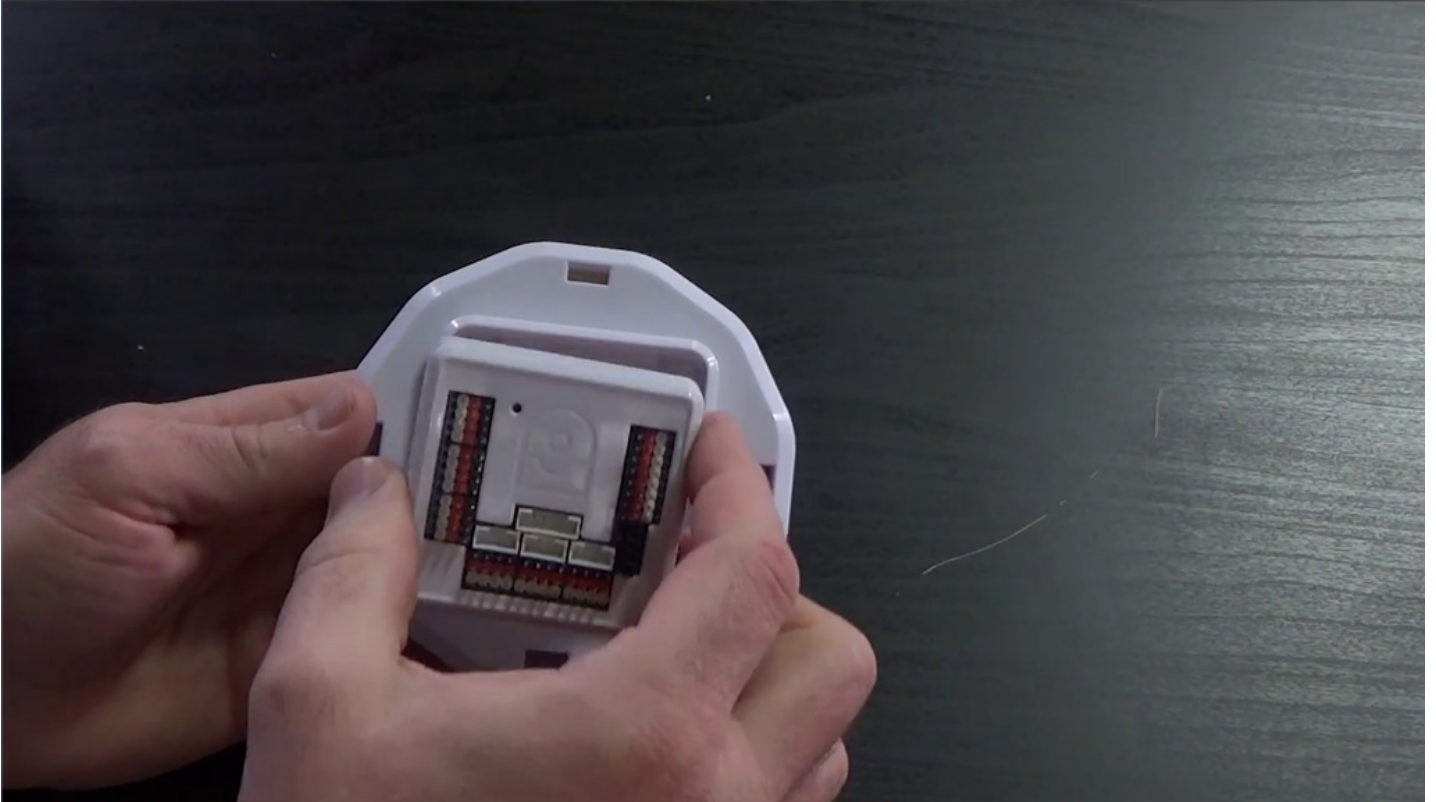
Clip'n'Play a **Lever Servo** into the "1 o'clock position".
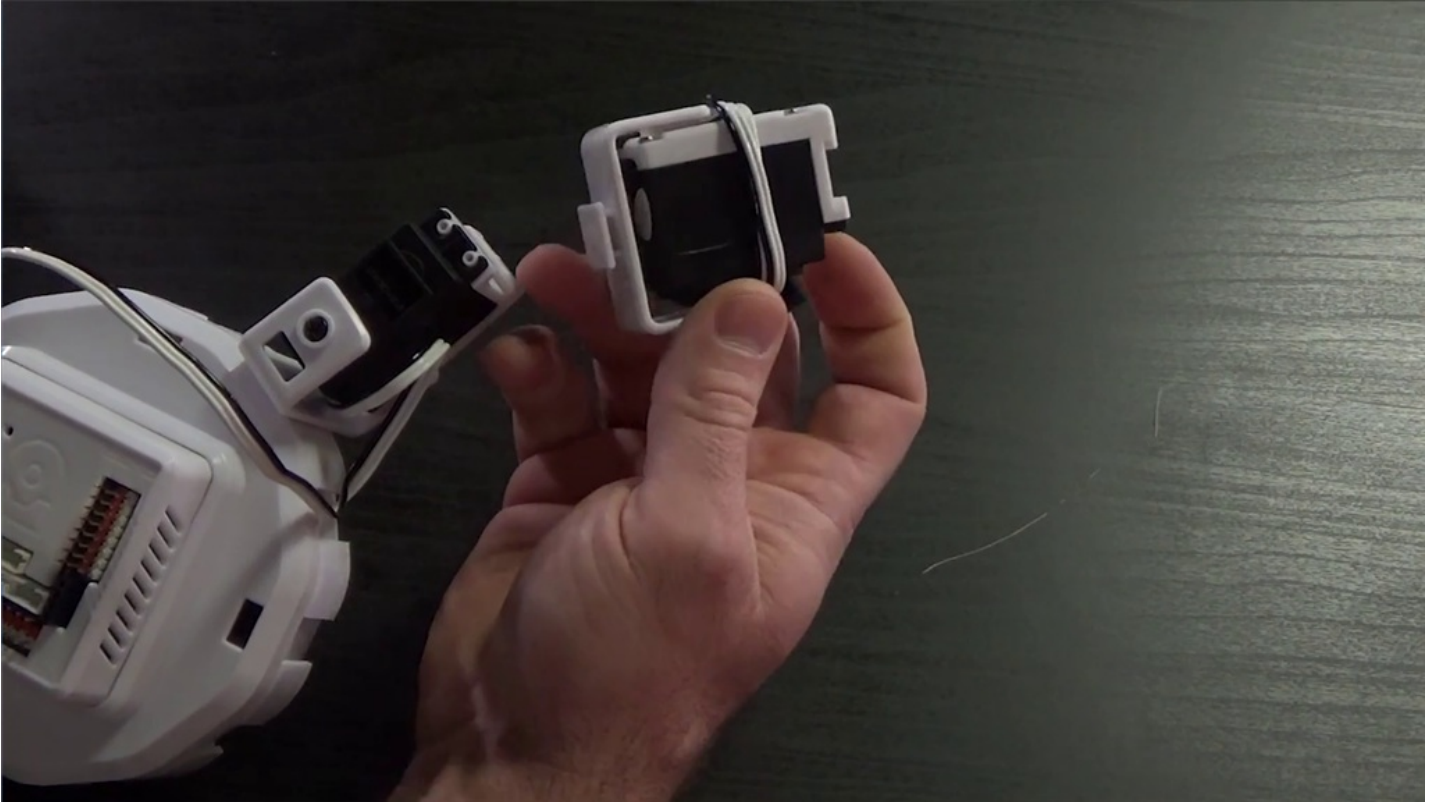
Connect the servo to **D0**.

Match the black wire on the cable to the black side of the **EZ-B** port. The cables use a male-to-female connection.

Clip'n'Play the outside **Lever Servo** with the white bracket on the left-hand side.
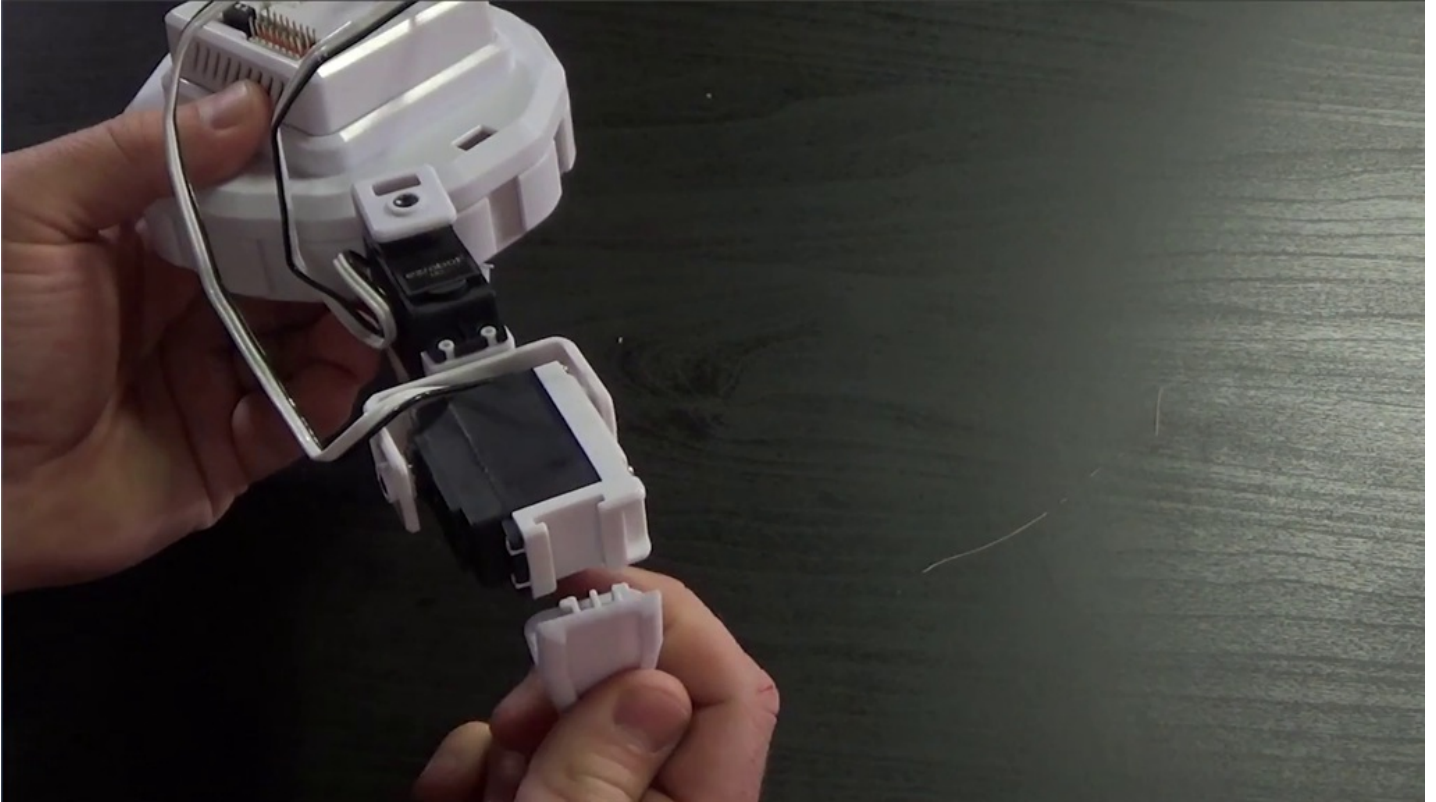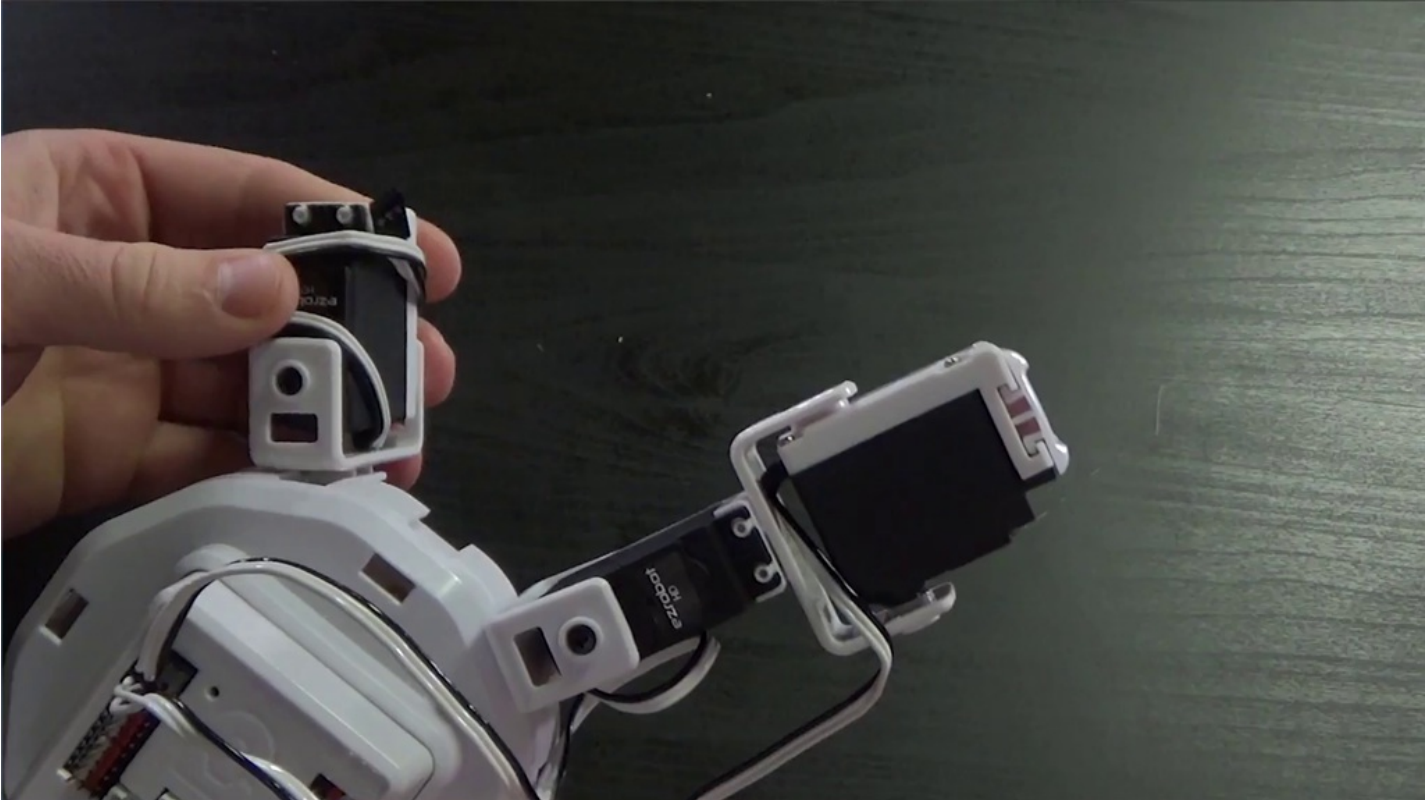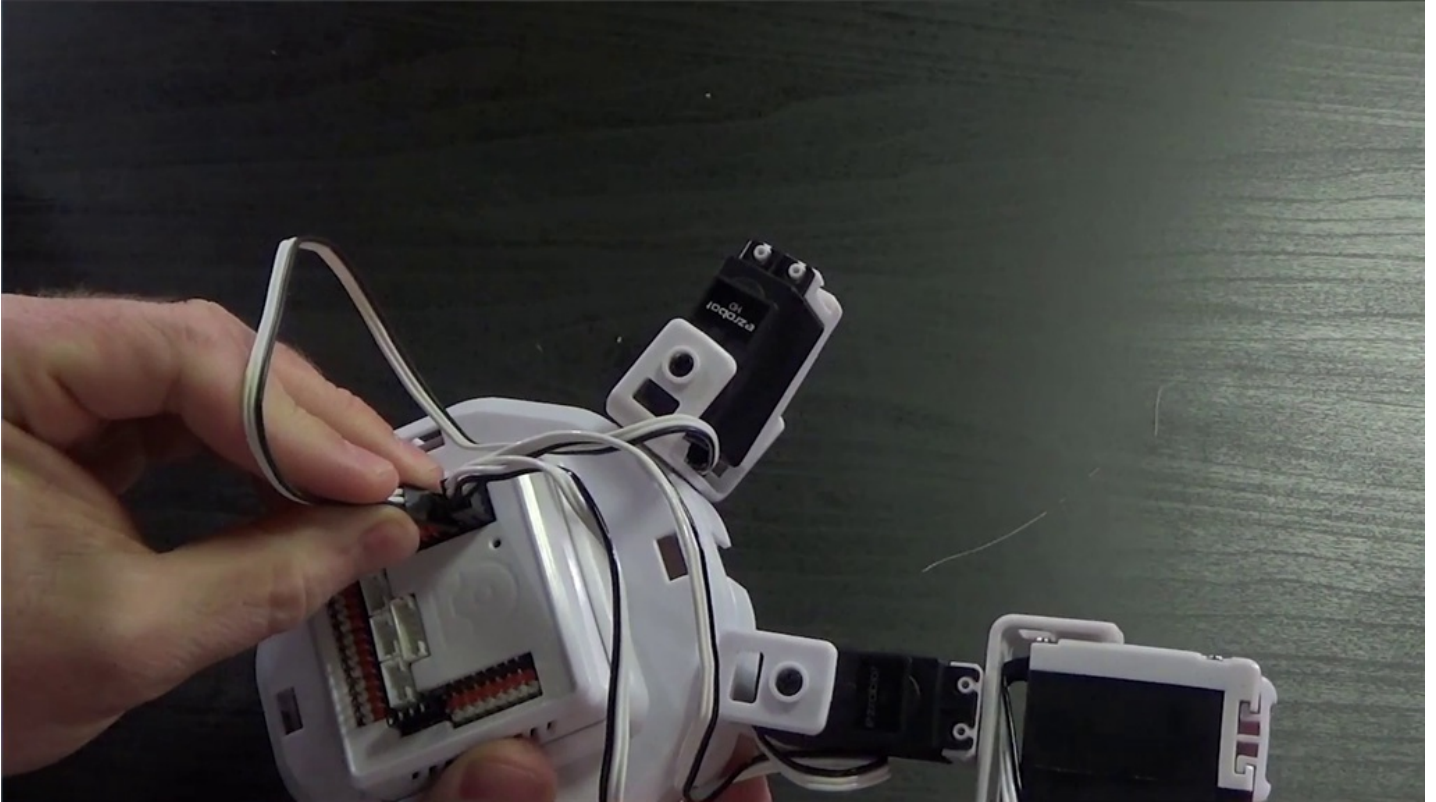
Step 13

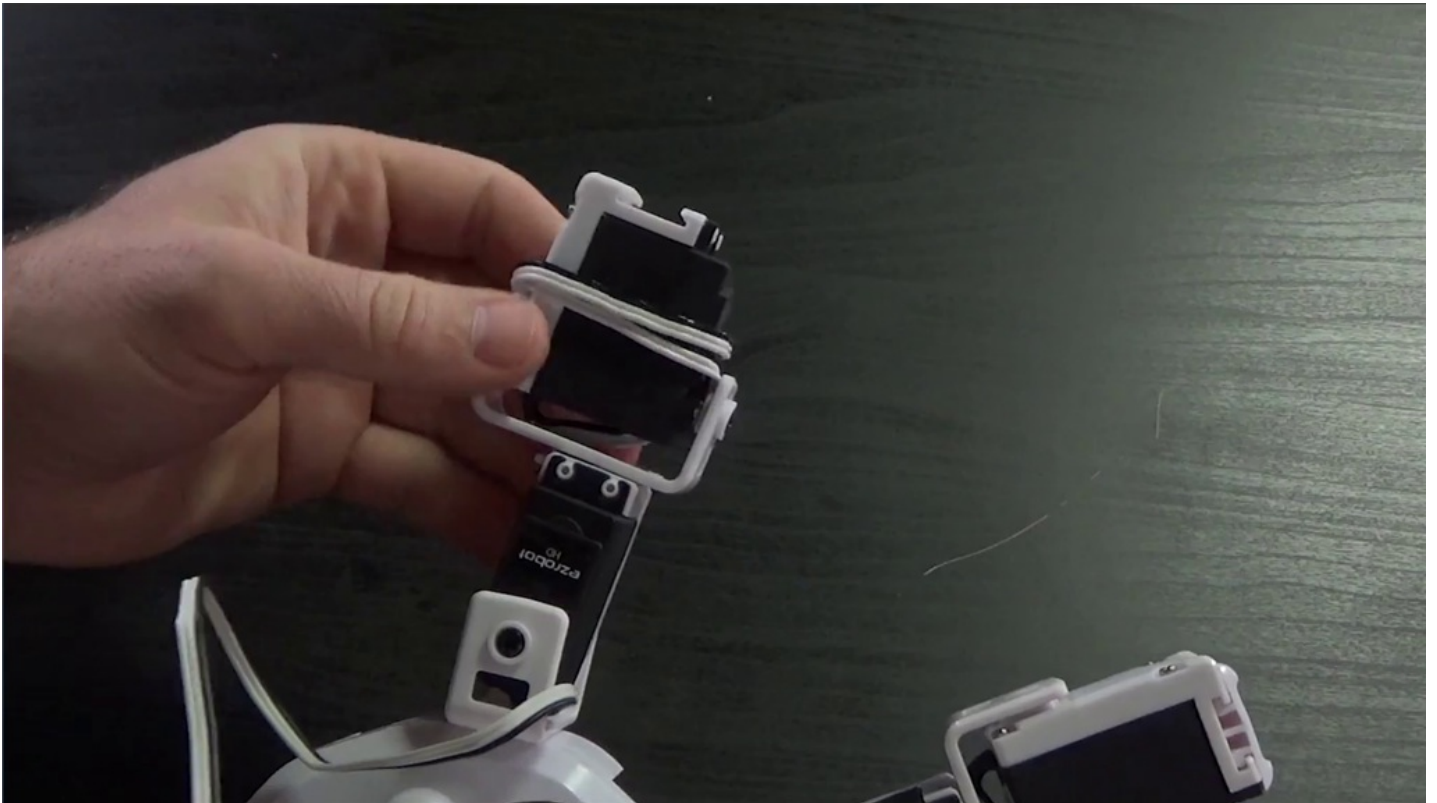Connect the servo to **D1**.

Complete this leg with a **Hexapod Foot**.

Clip'n'Play a **Lever Servo** into the "11 o'clock position".

Step 16

Connect the servo to **D3**.

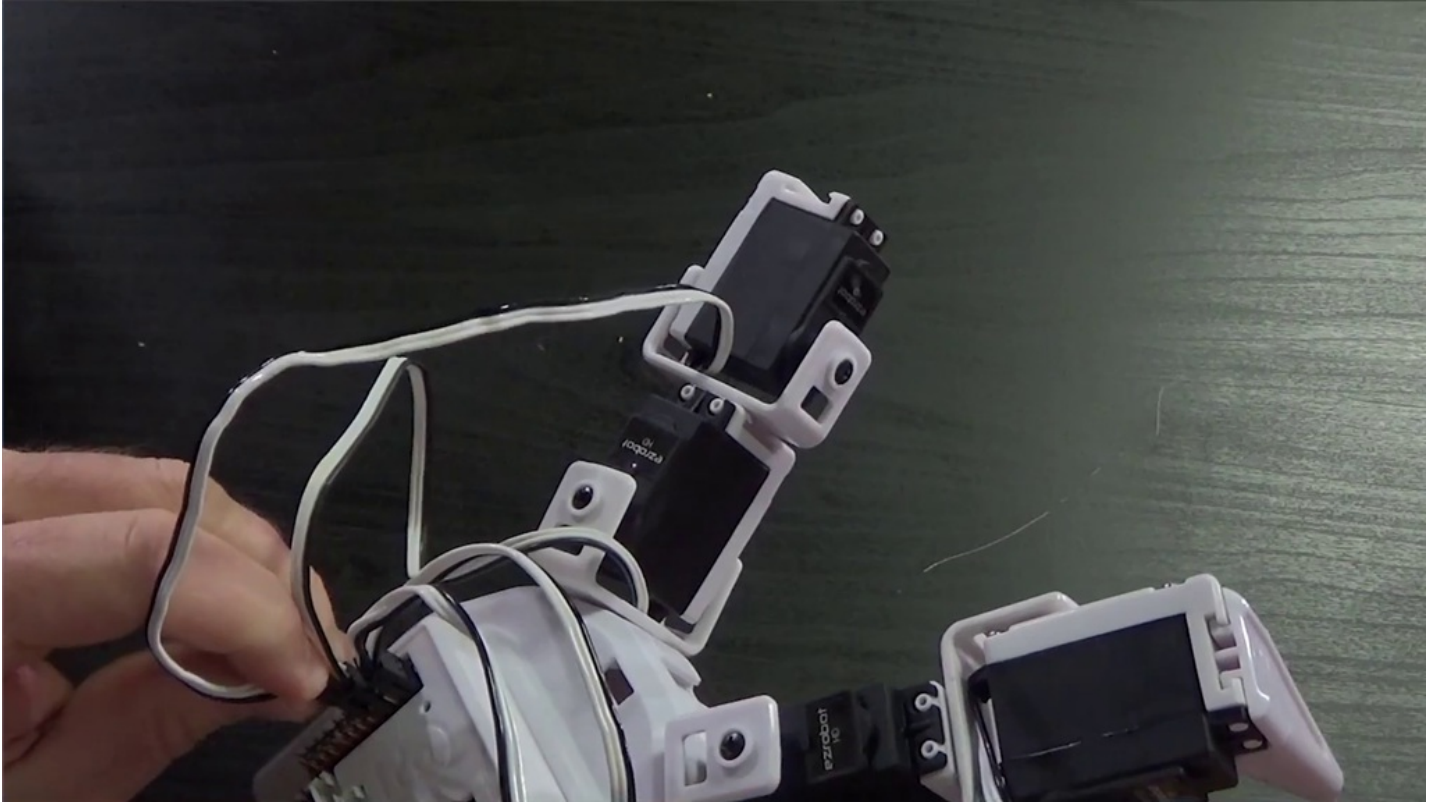**Clip'n'Play** the outside **Lever Servo** with the white bracket on the left-hand side.

Connect the servo to **D4**.

Complete this leg with a **Hexapod Foot**.
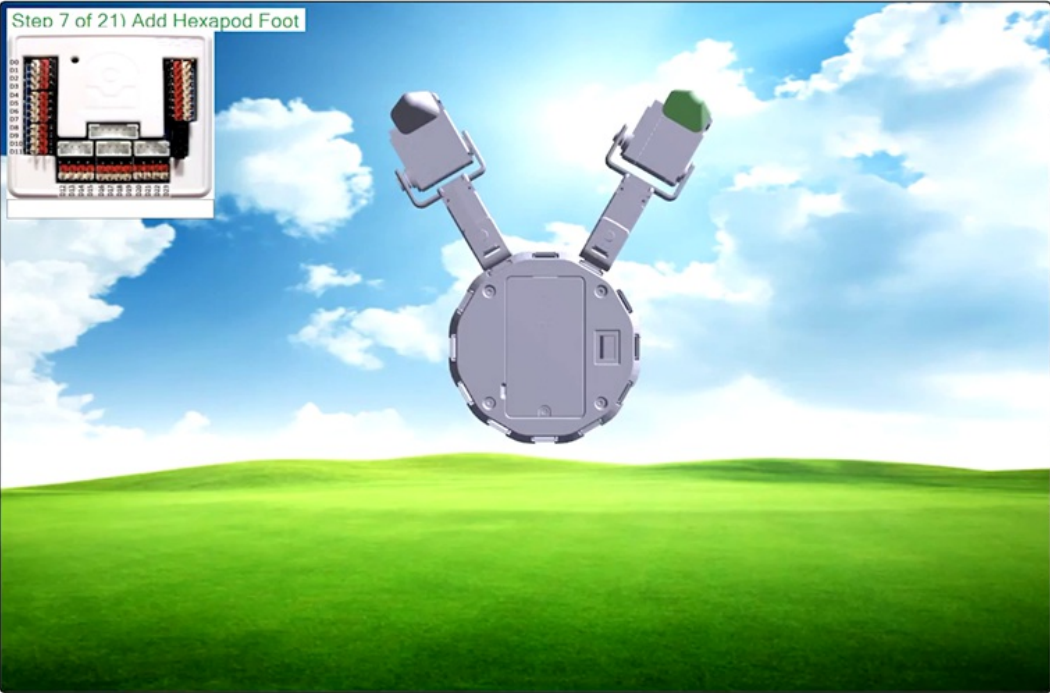
Clip'n'Play a **Lever Servo** into the "9 o'clock position".
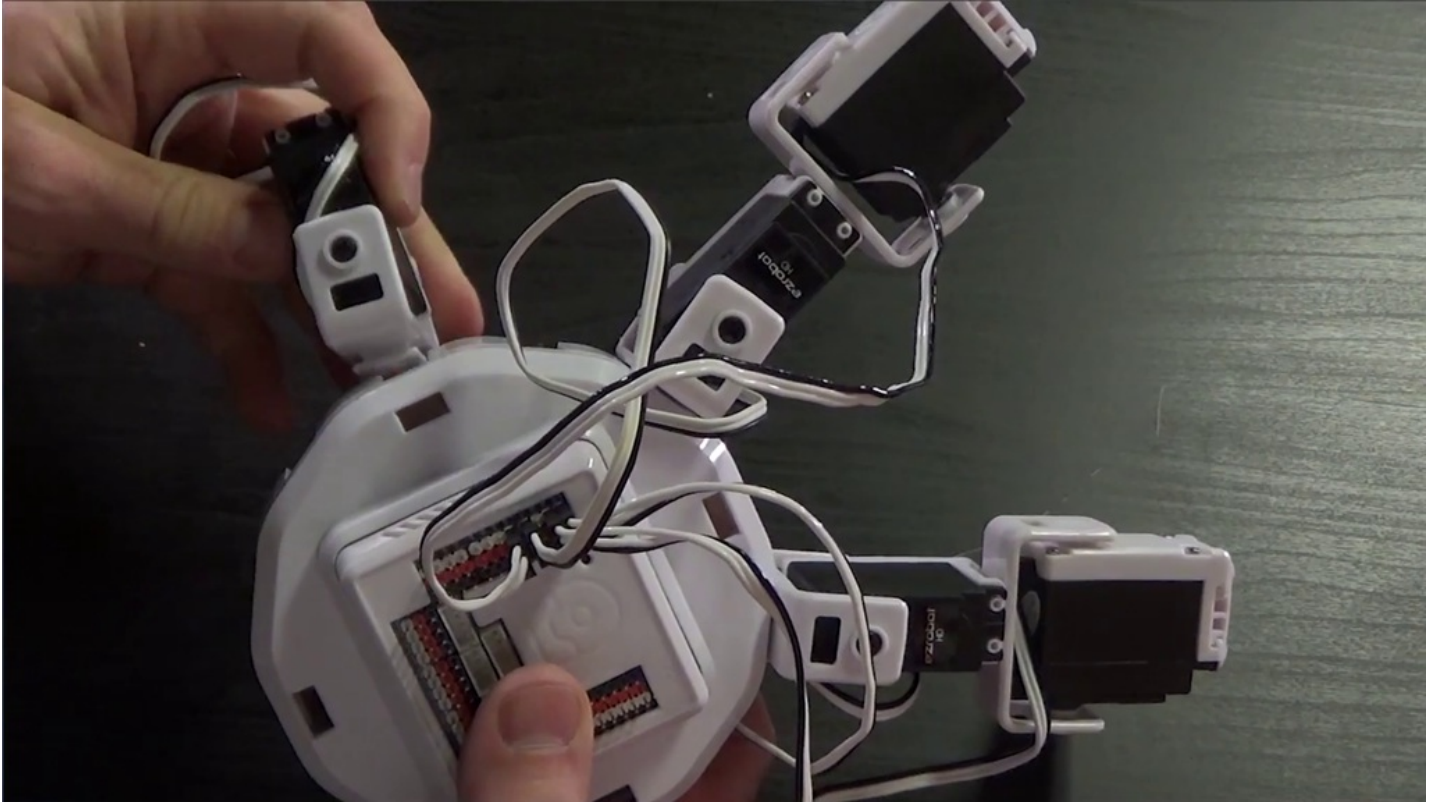
Step 21

Connect the servo to **D6**.
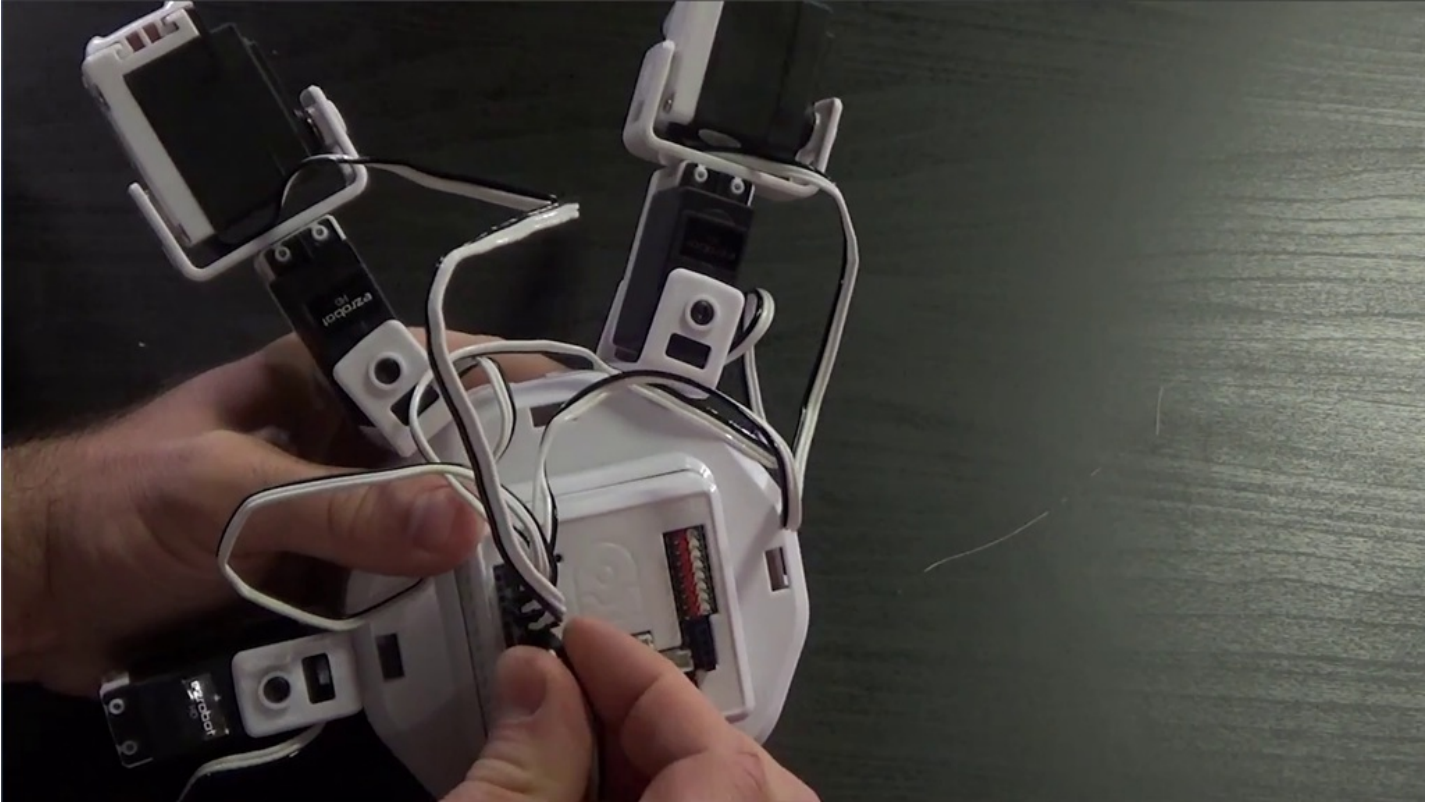
Clip'n'Play the outside **Lever Servo** with the white bracket on the left-hand side.

Connect the servo to **D7**.

Complete this leg with a **Hexapod Foot**.

Clip'n'Play a **Lever Servo** into the "7 o'clock position".

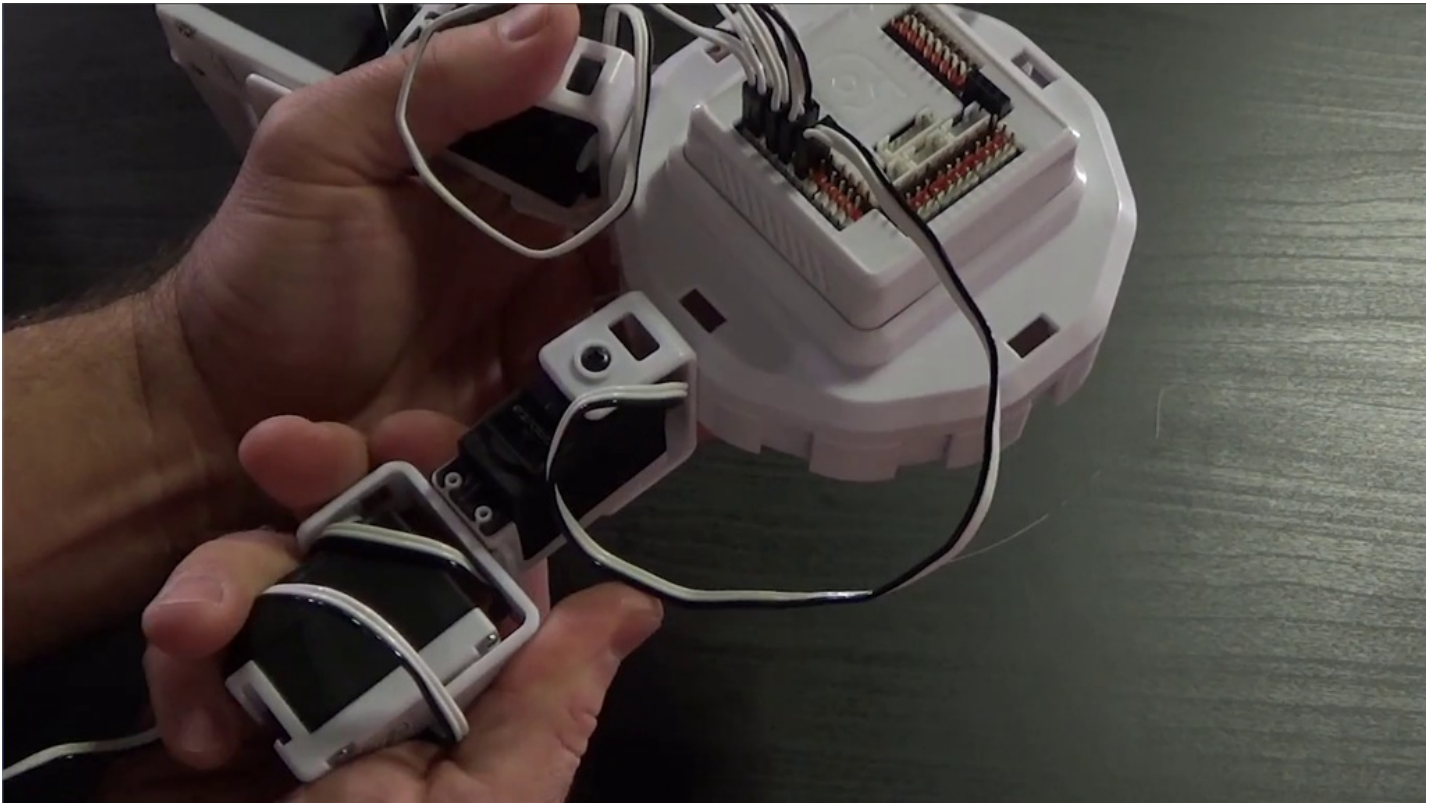# Ⓢ Step 26

Connect the servo to **D9**.

Clip'n'Play the outside **Lever Servo** with the white bracket on the left-hand side.

⑤ Step 28

Connect the servo to **D10**.

Complete this leg with a **Hexapod Foot**.

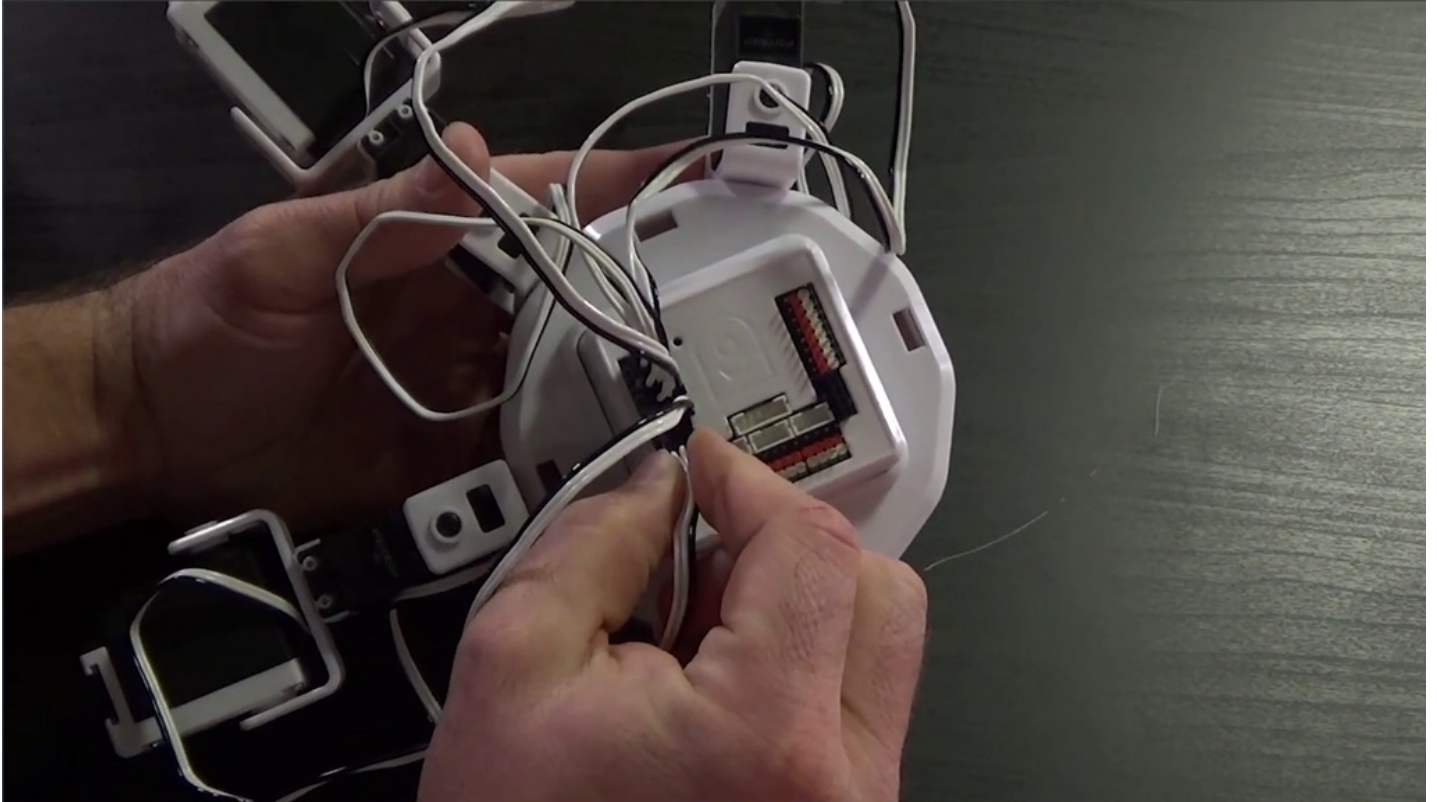**Clip'n'Play** a **Lever Servo** into the "5 o'clock position".

Connect the servo to **D12**.

Clip'n'Play the outside **Lever Servo** with the white bracket on the left-hand side.

Connect the servo to **D13**.

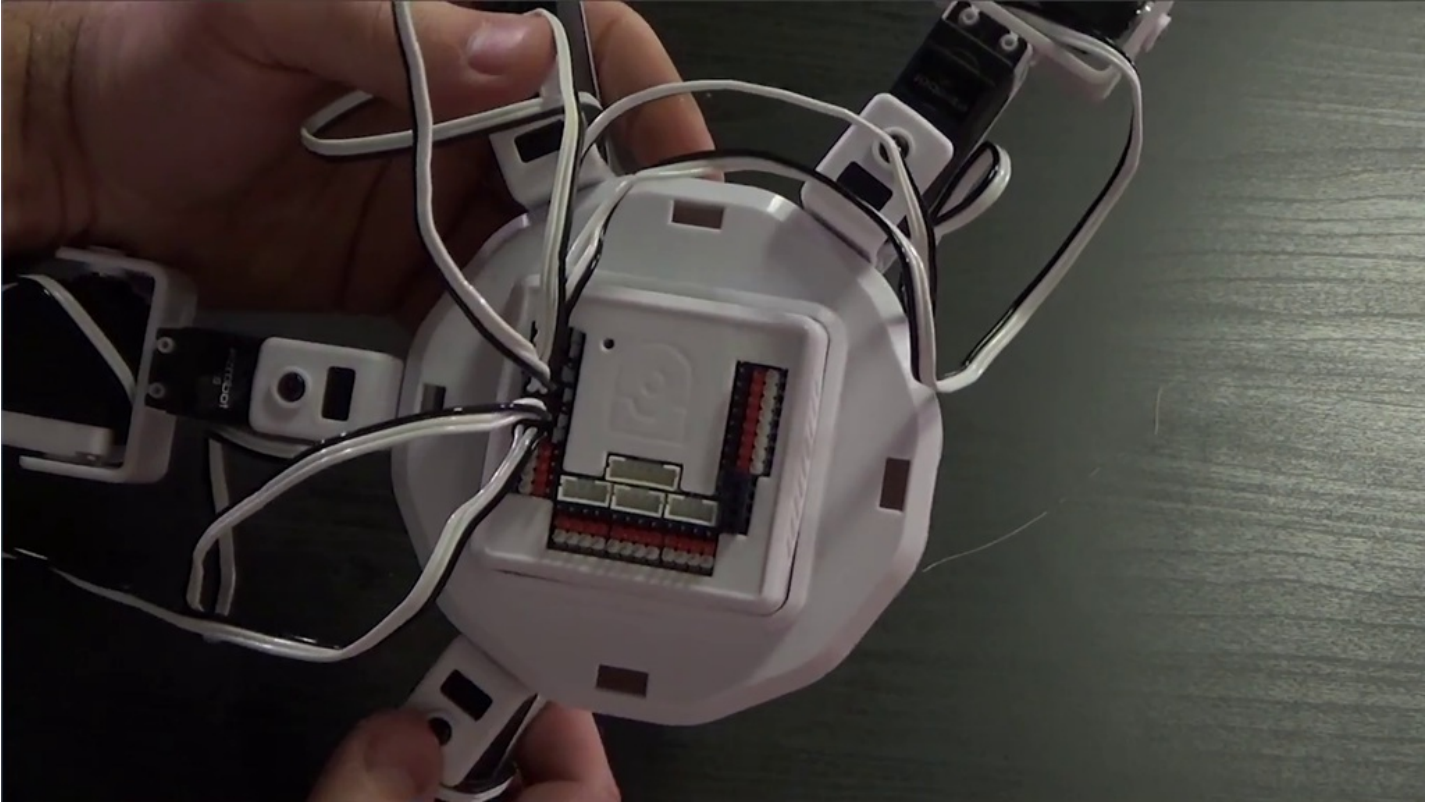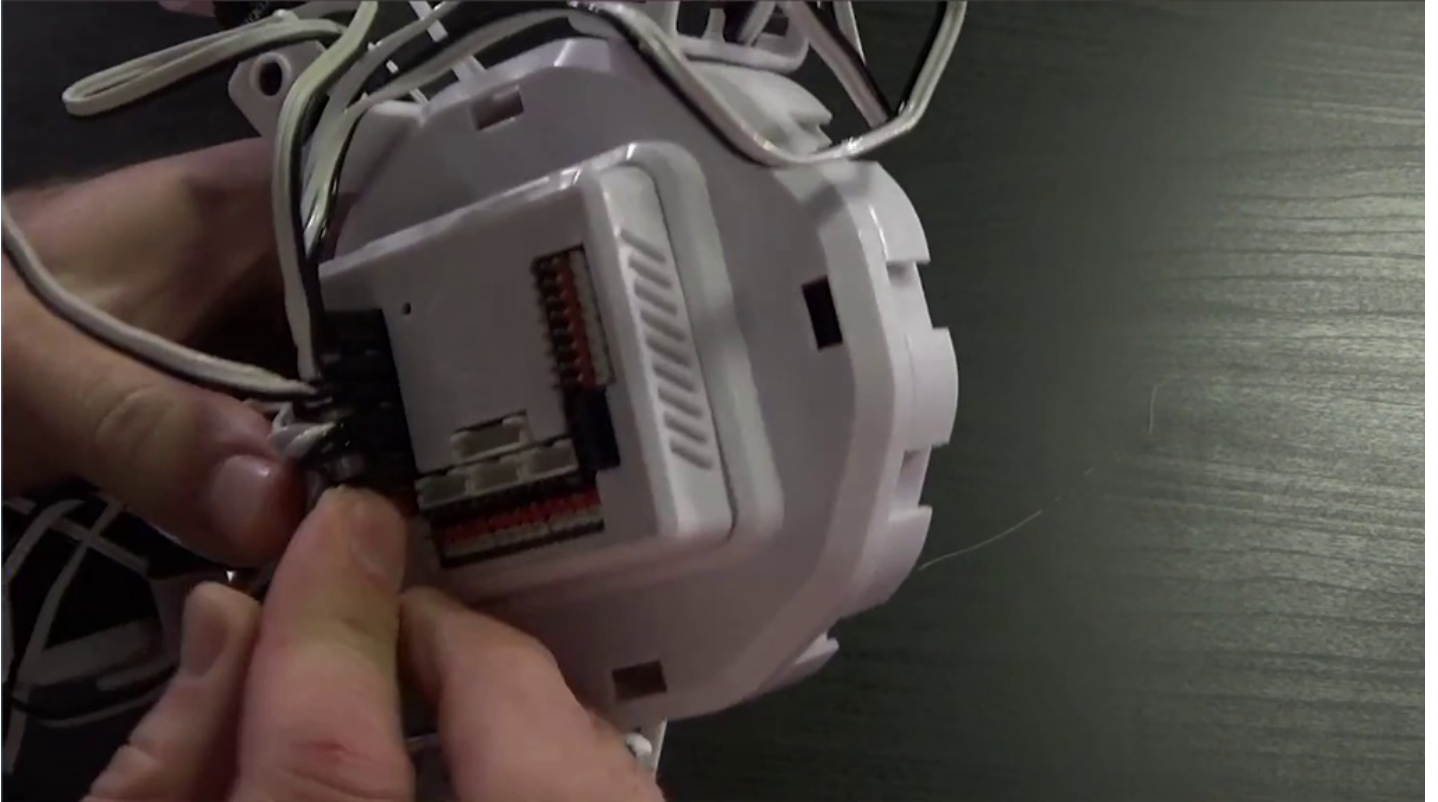Complete this leg with a **Hexapod Foot**.

Clip'n'Play a **Lever Servo** into the "3 o'clock position".

Connect the servo to **D15**.

Clip'n'Play the outside **Lever Servo** with the white bracket on the left-hand side.
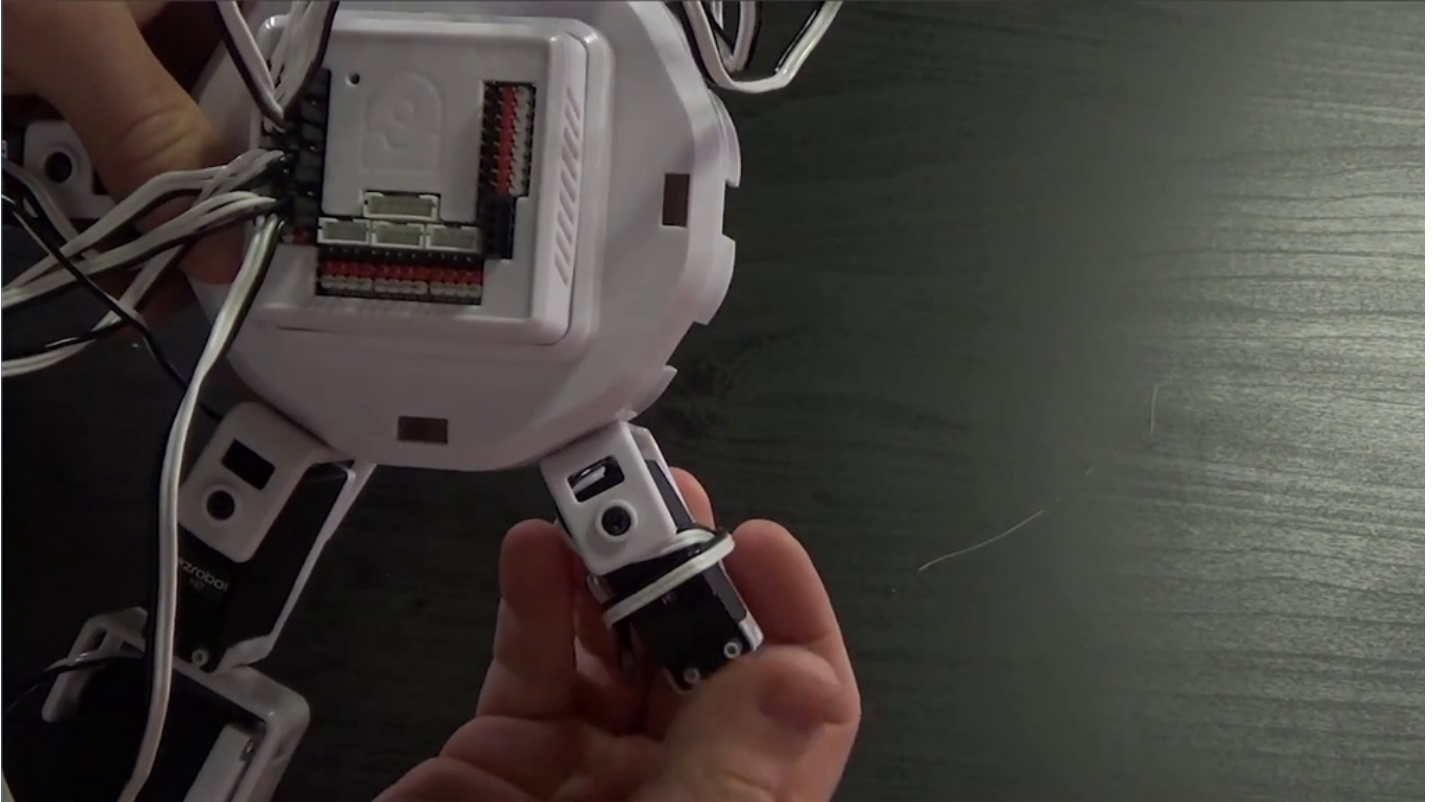
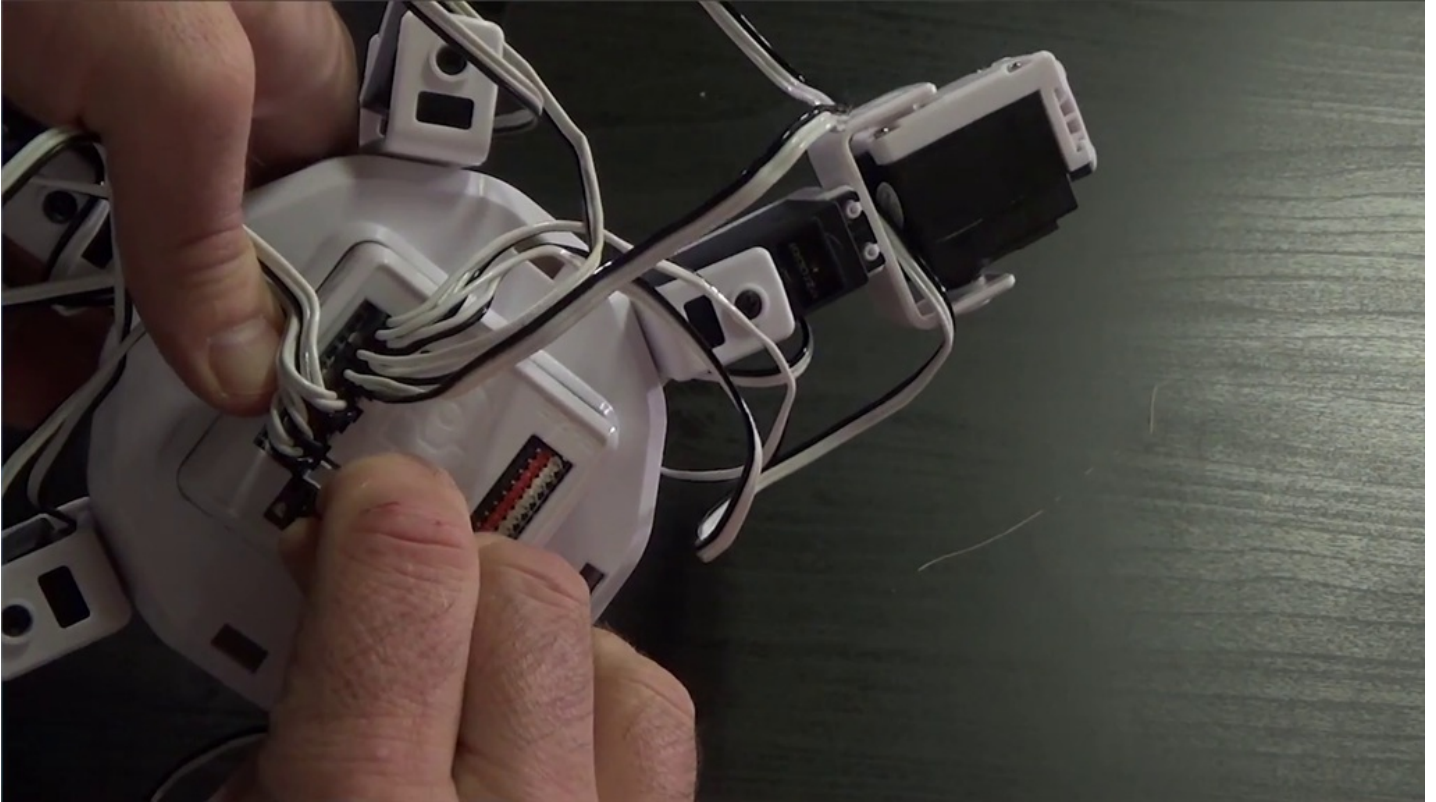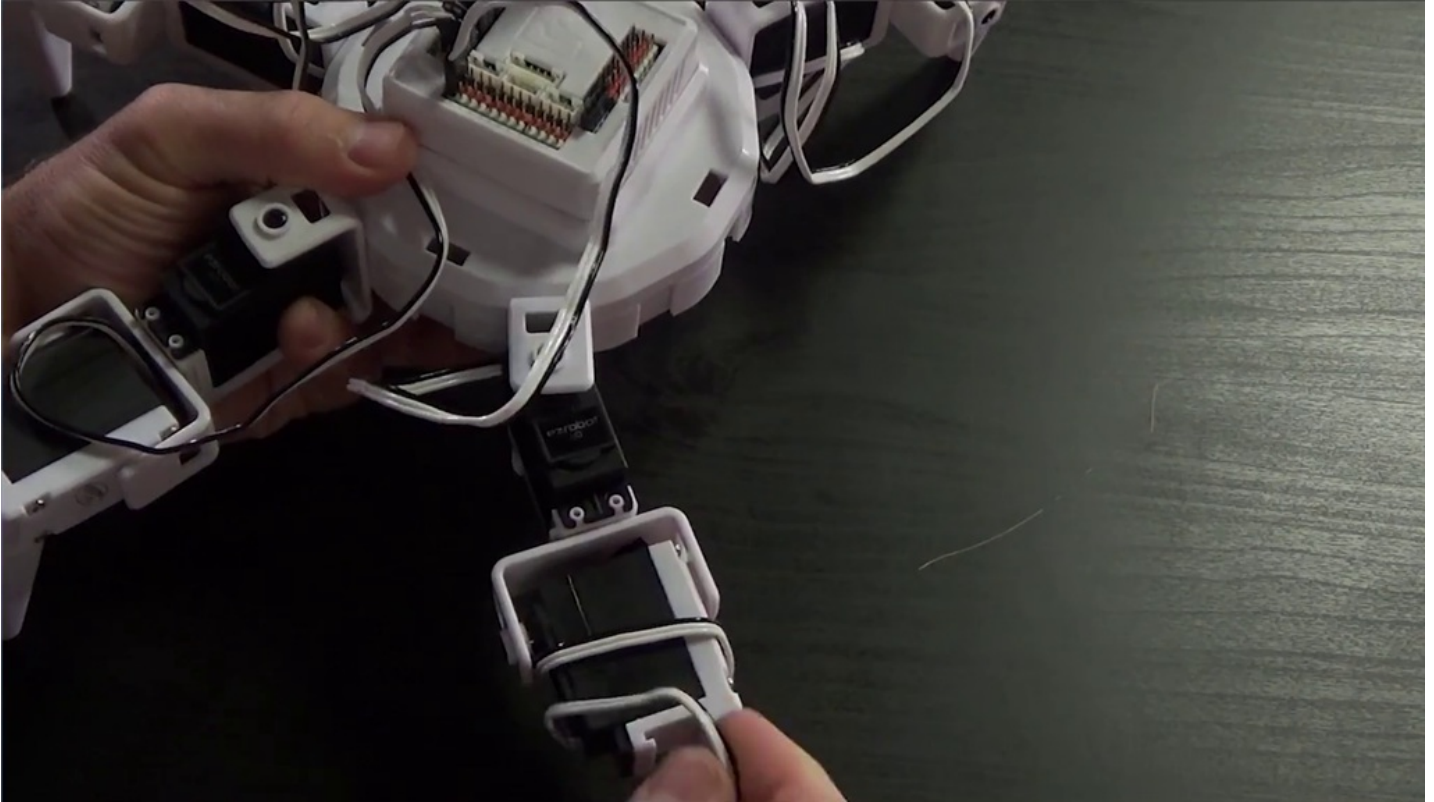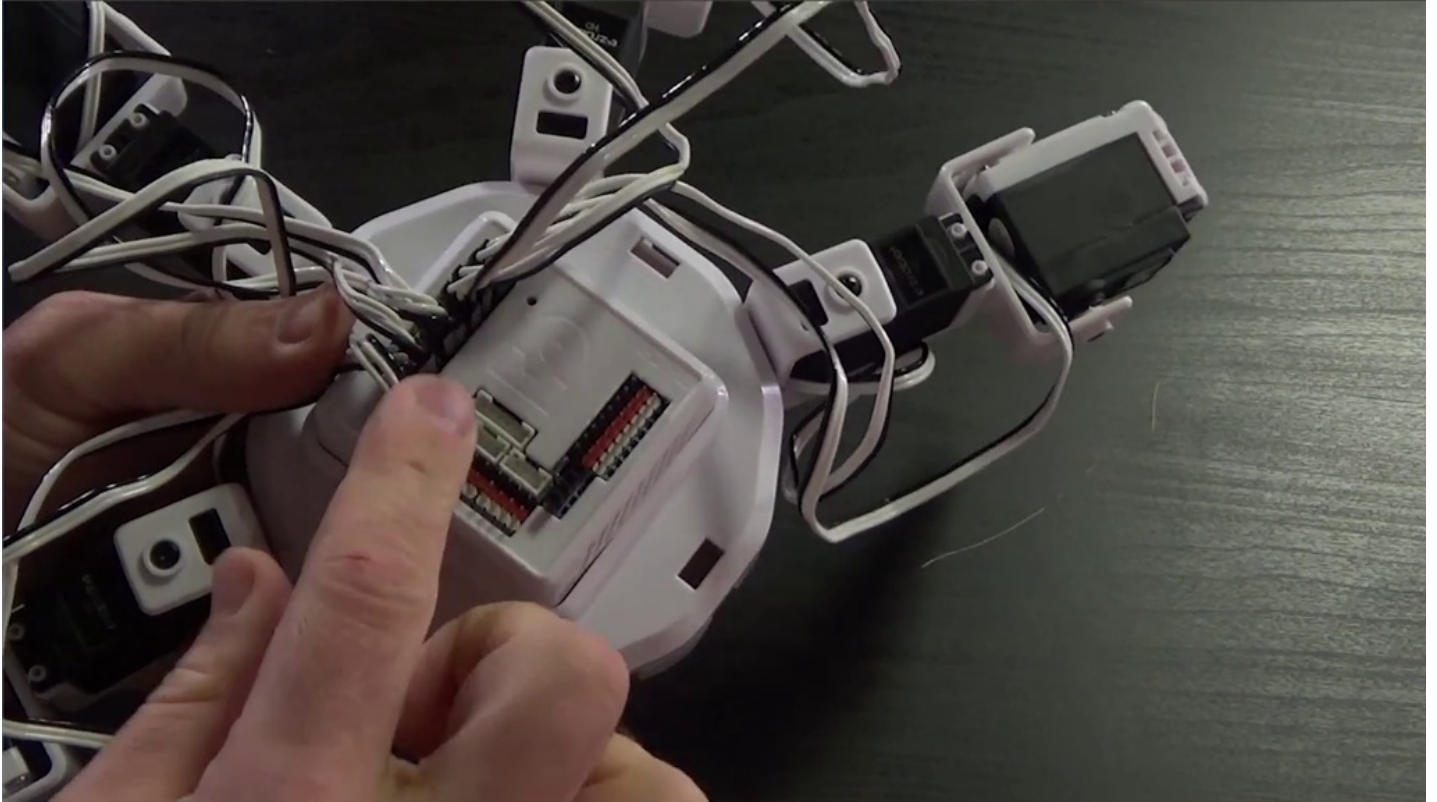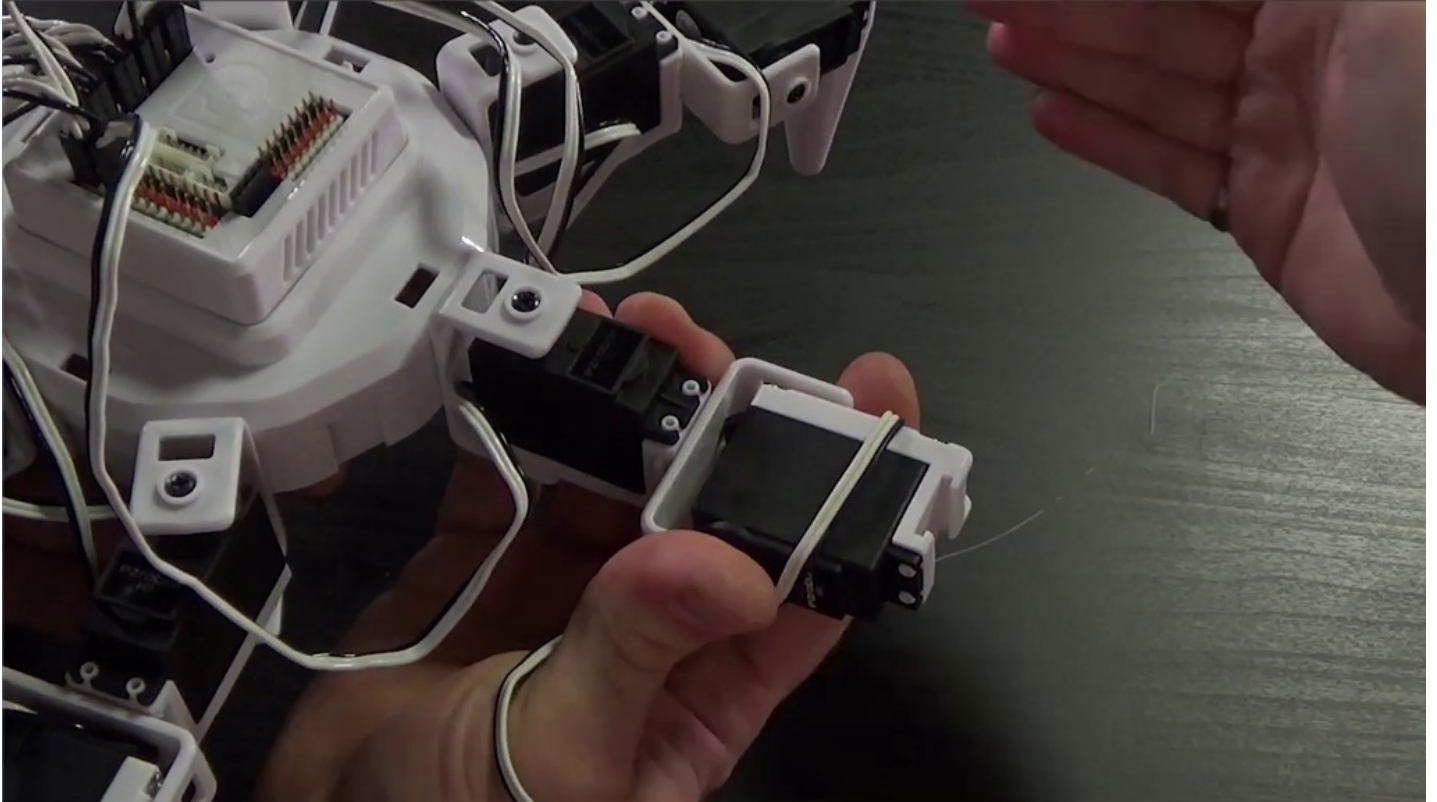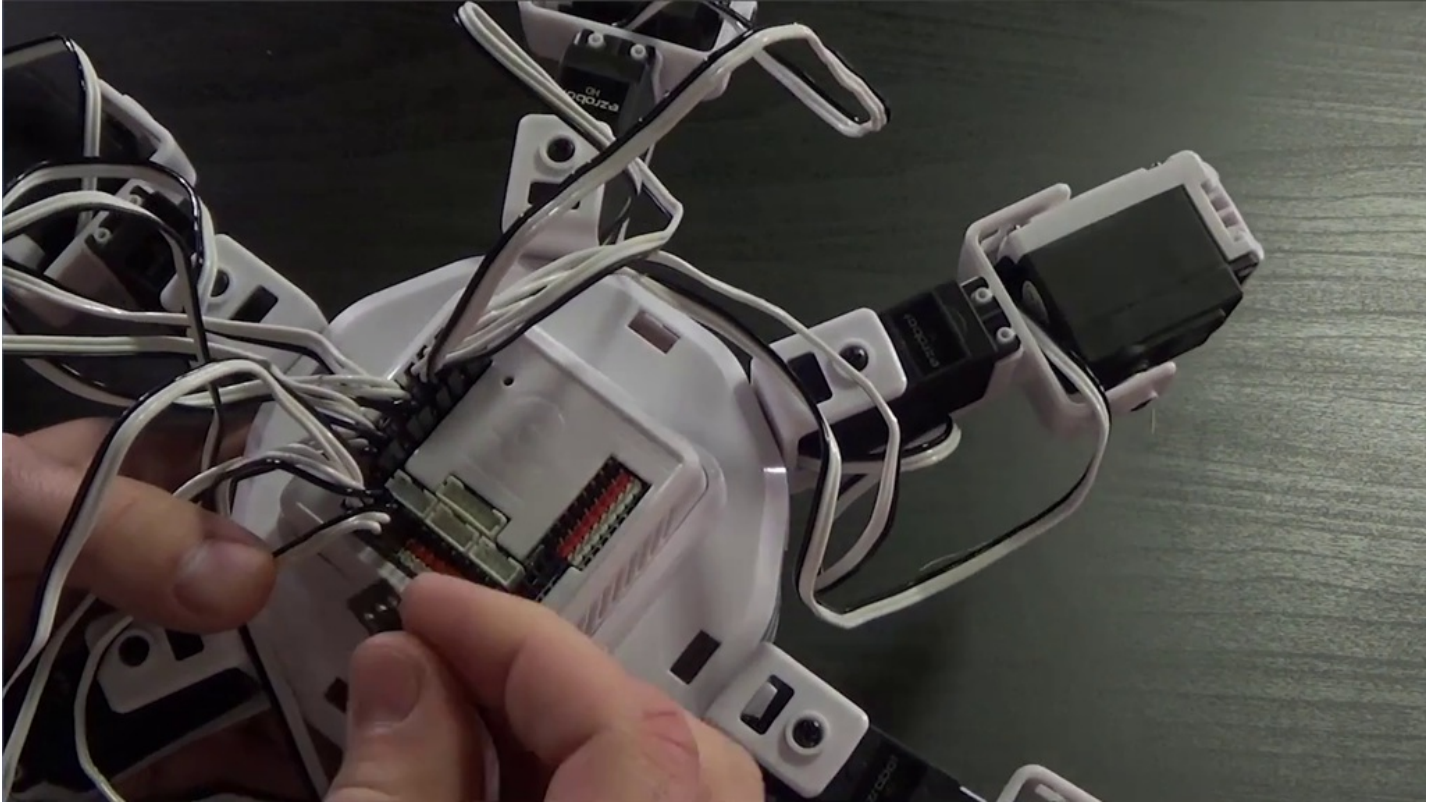Connect the servo to **D16**.
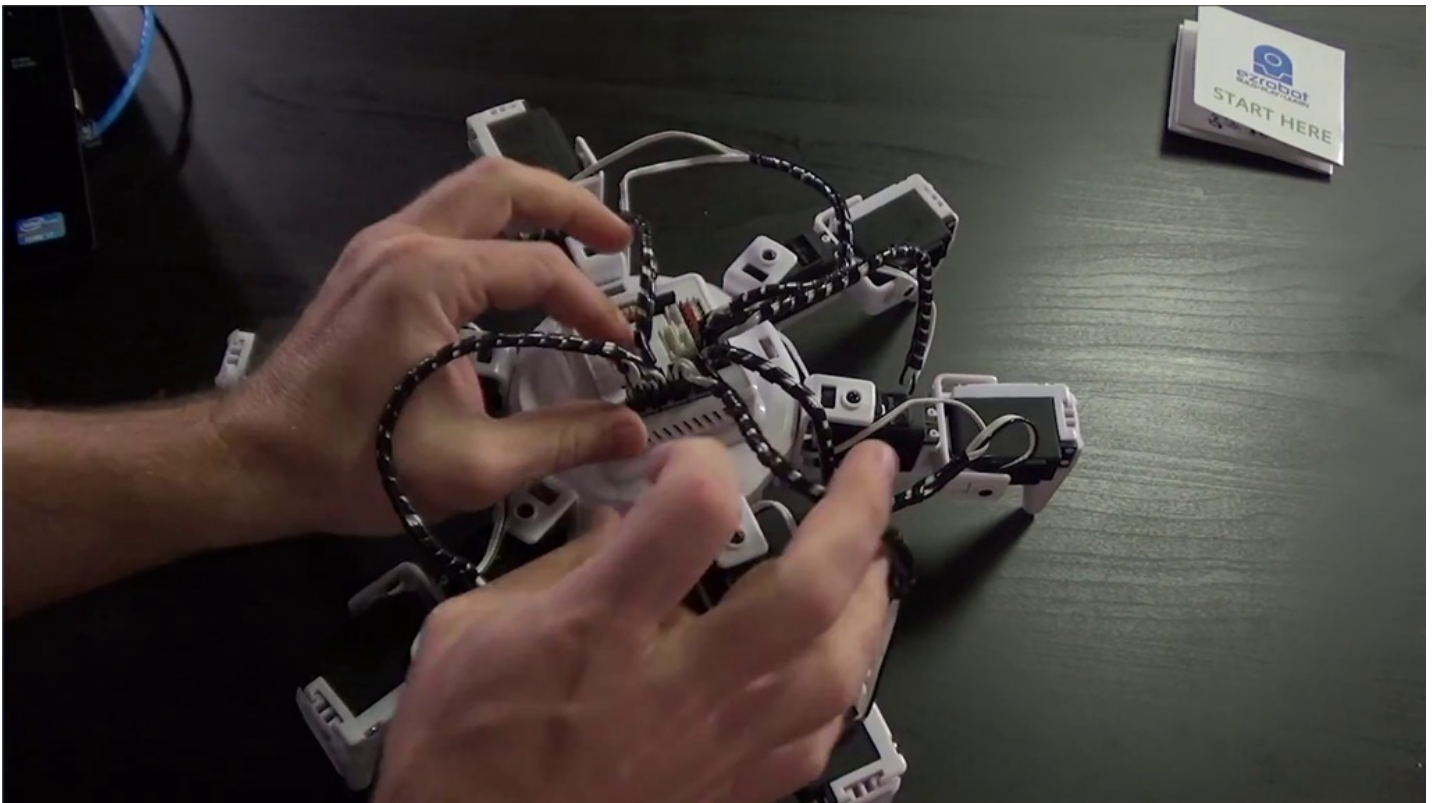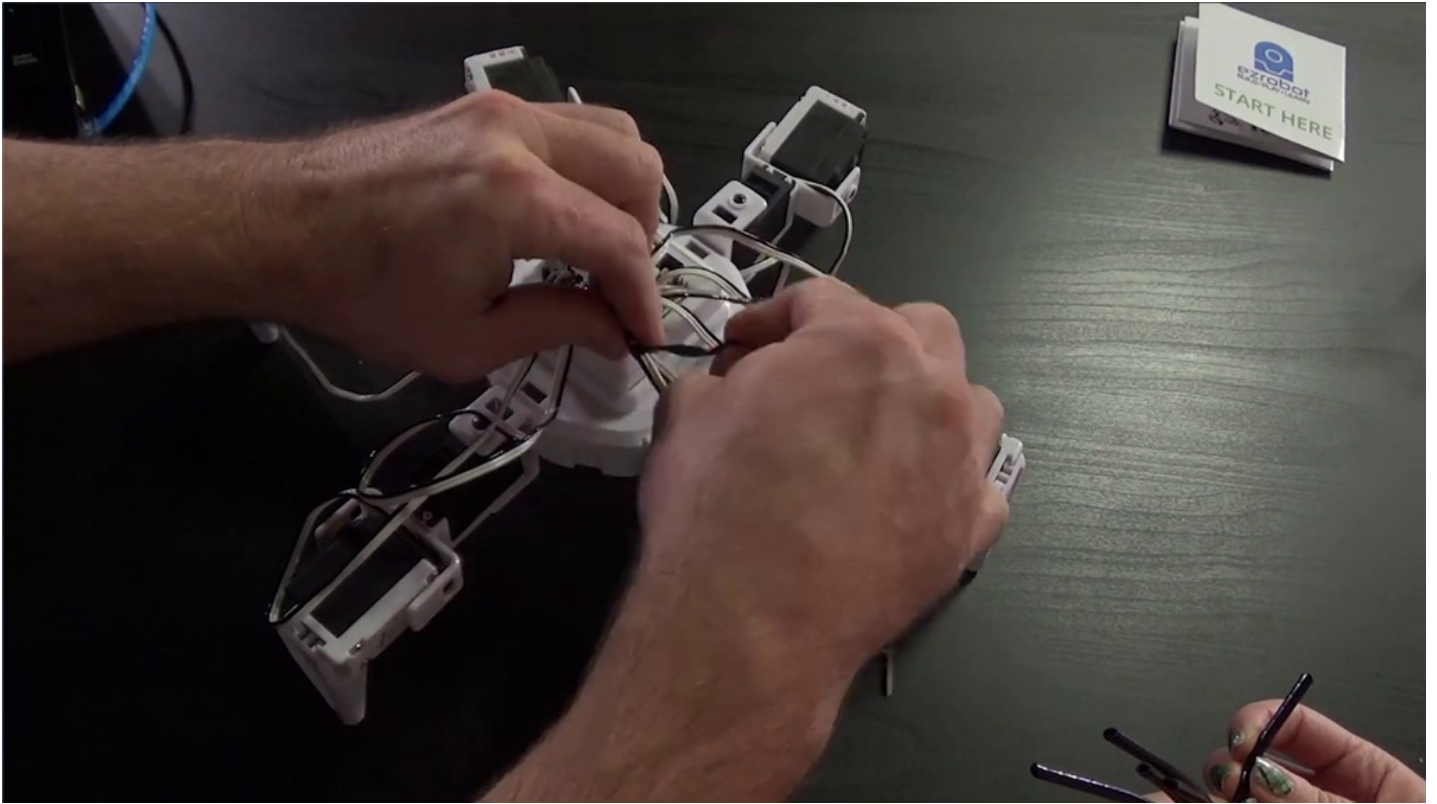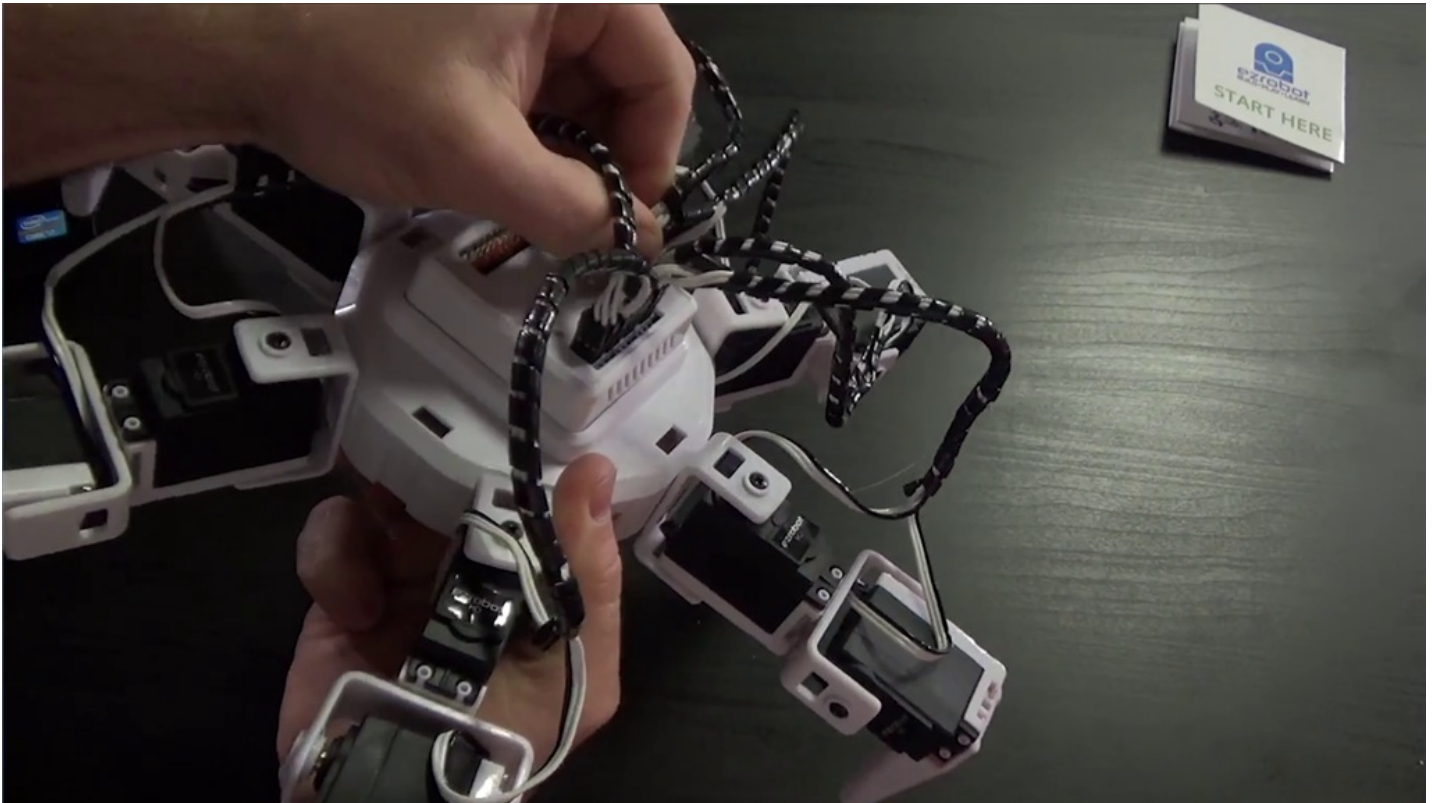
Complete this leg with a **Hexapod Foot**.

Use **Wire Wraps** to organize cables. Begin wrapping near the **EZ-B** and wrap downwards toward leg servos. Leave cable slack near servos for full range of motion.
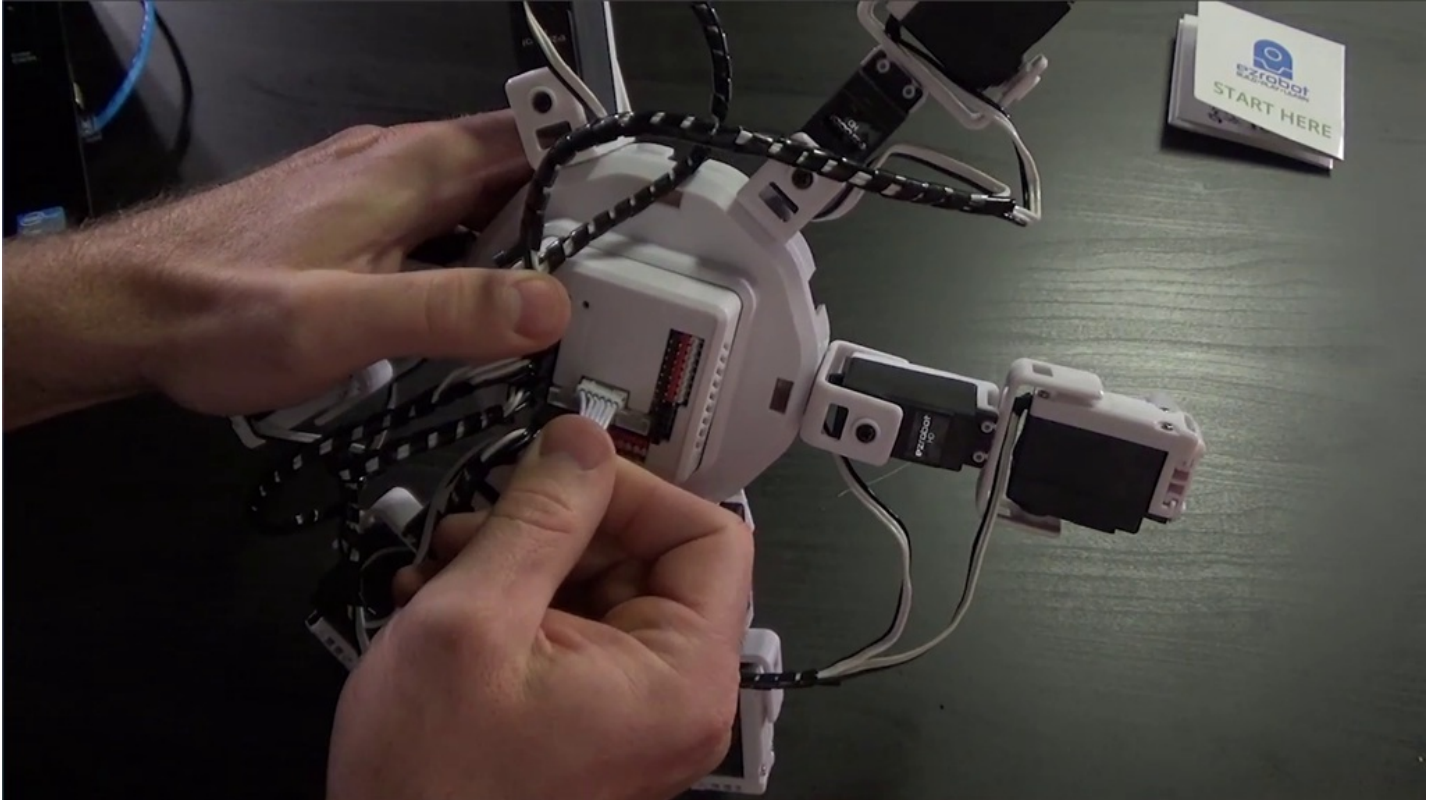
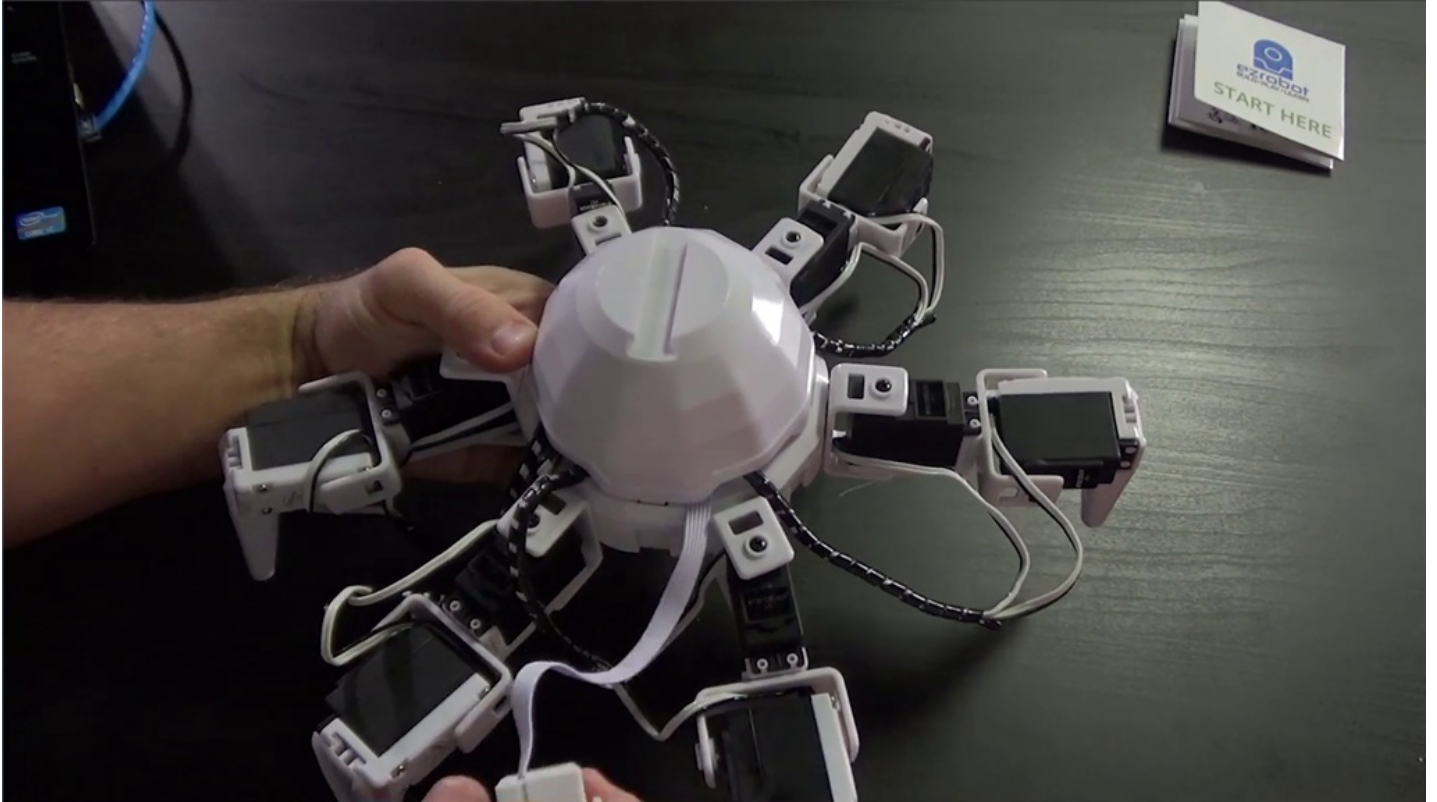Check that connections are still secure and test for full motion.

Connect the **Camera** cable to the **<u>camera</u>** port.

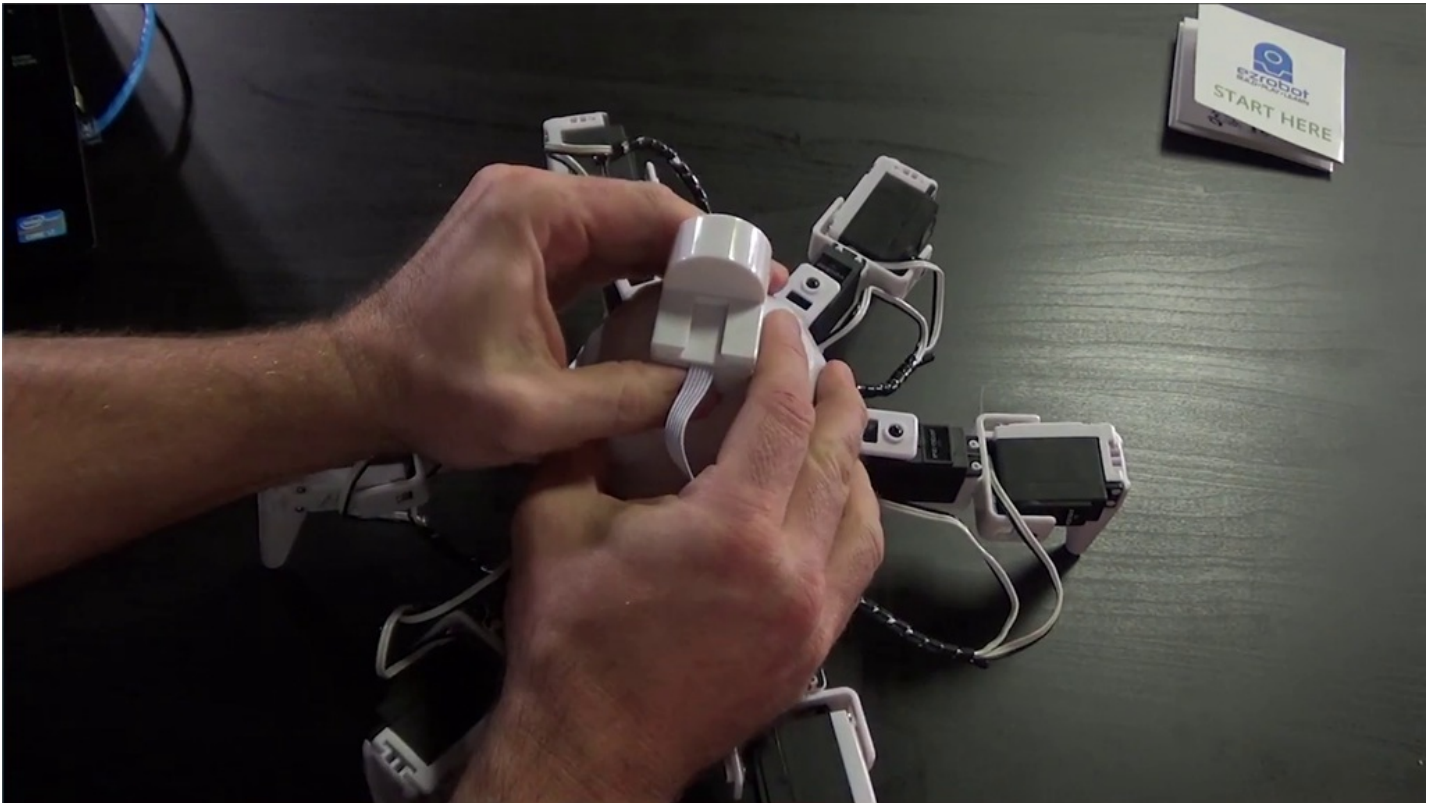# Step 43

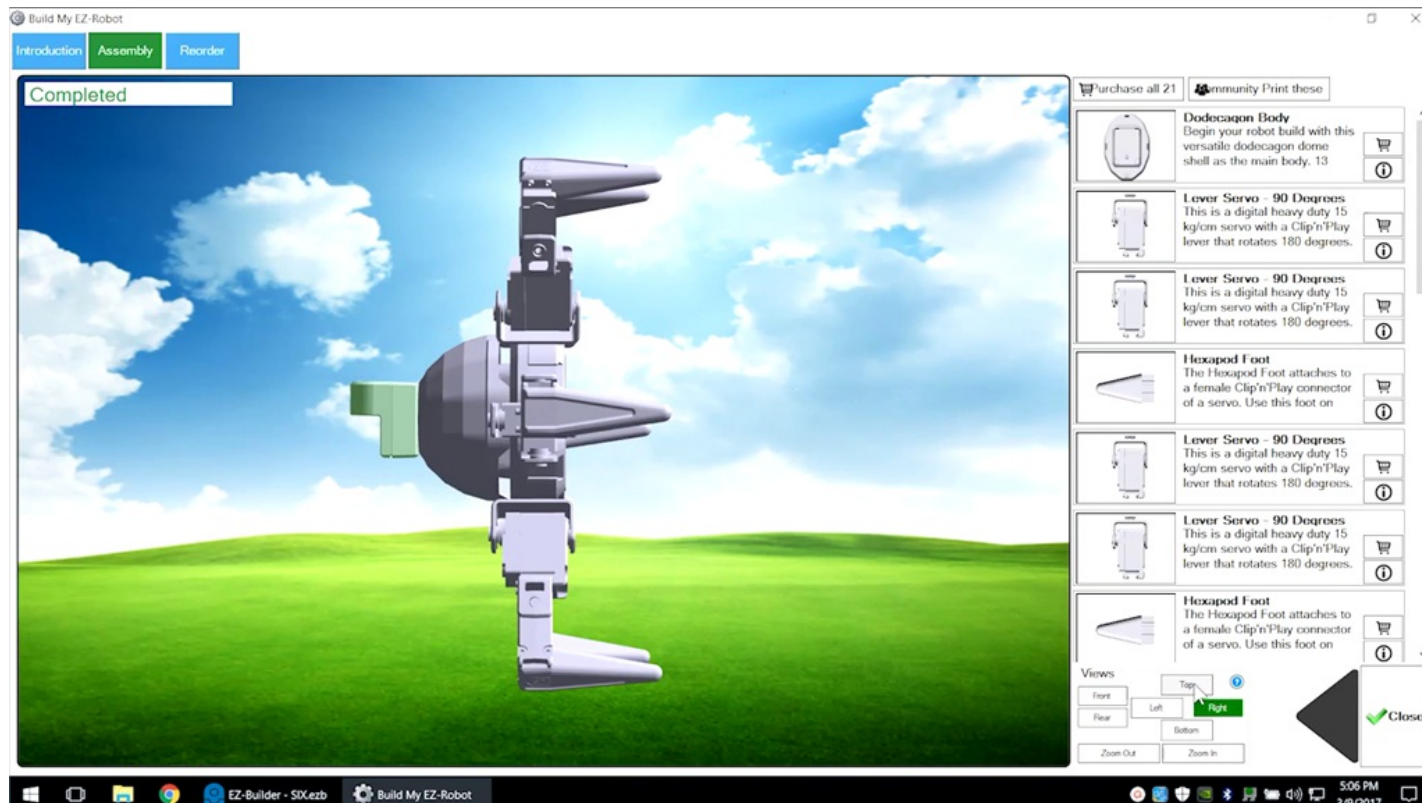Align the **Hexapod Dome** with the front of the robot.

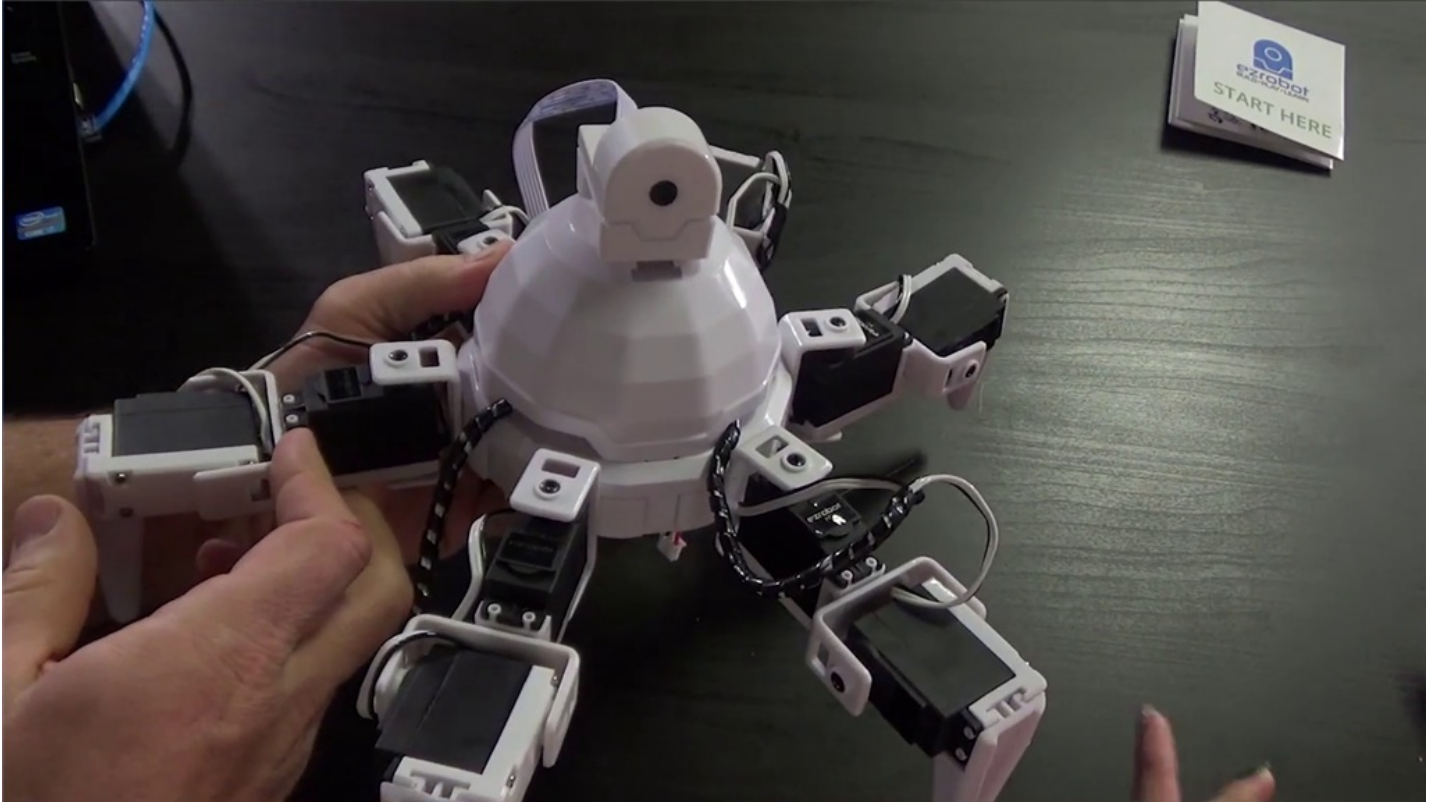Slide the **Camera** into the top of the **Hexapod Dome**.

Use the 3D view buttons to check all angles.

Your **Revolution Six** is now complete!

ⓢ Quiz

Question #1 Six's cables are what type of connection?

Question #2 What is the label of the first digital port?

Question #3 Why is wire wrapping a good idea?

View the answers to this quiz at www.ez-robot.com/Tutorials/Lesson/62.

Visit www.TheRobotProgram.com for more episodes.