SYNTHIAM

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The Robot Program Episode 011: Building AdventureBot

This lesson will demonstrate how to build the Revolution AdventureBot robot. Follow along with The Robot Program Episode 011: Building AdventureBot. 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 Clipâ€™nâ€™Play the EZ-Bit robot components, and how to secure the connections to the EZ-B Robot Controller for fully building AdventureBot.

View the video episode here: https://www.ez-robot.com/Tutorials/Lesson/82

Last Updated: 5/29/2018

Professor E's Overview

This lesson demonstrated how to build the **Revolution AdventureBot** 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.

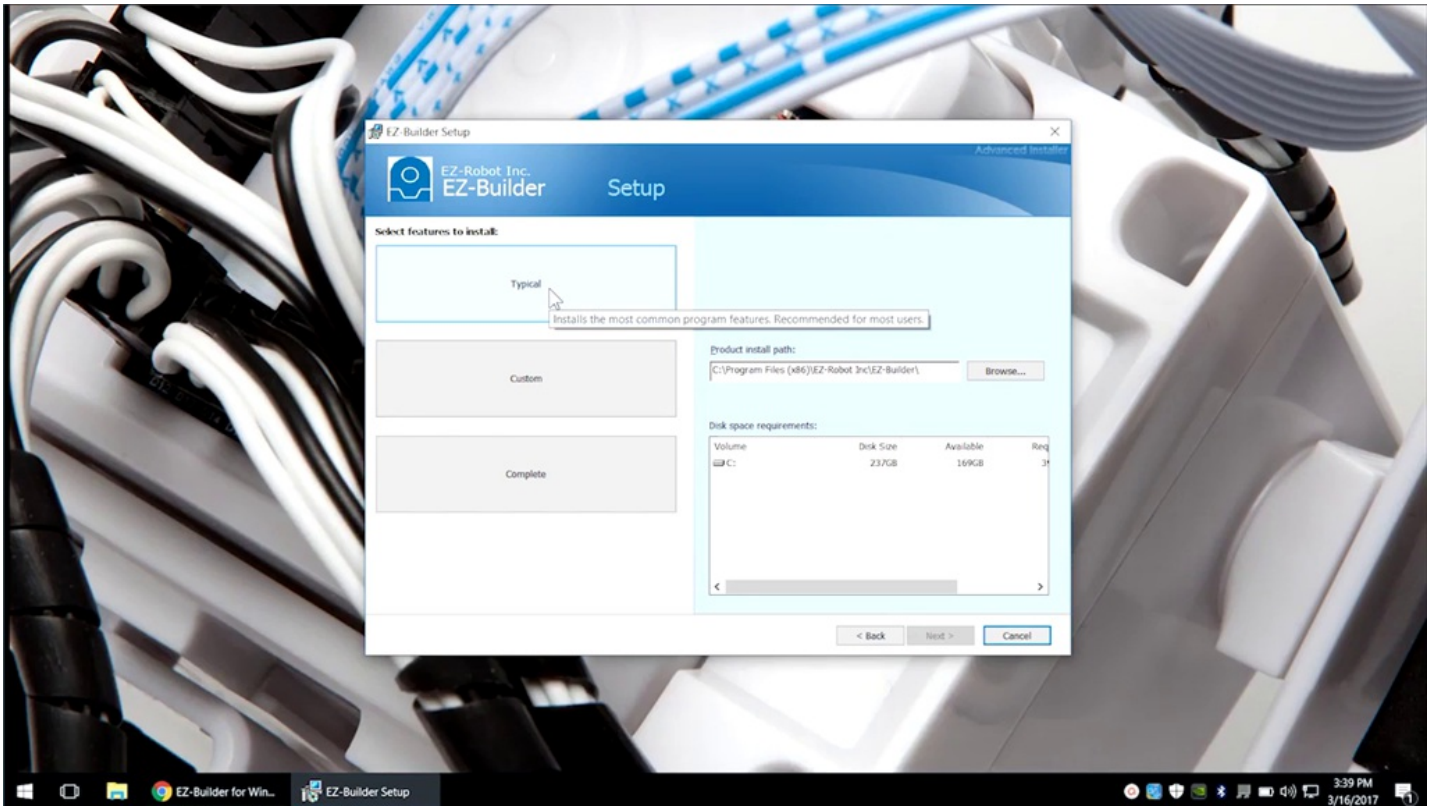
Adjust the cables so that they are coming out of the back of each **EZ-Bit**, which will make the connections easier to organize. Use **Wire Wraps** to clean up the cables into bundled sections, allowing the robot to have full range of motion. Check that the cables are not pinched by the **Dome**.

Step 1

Download **EZ-Builder** from ez-robot.com.

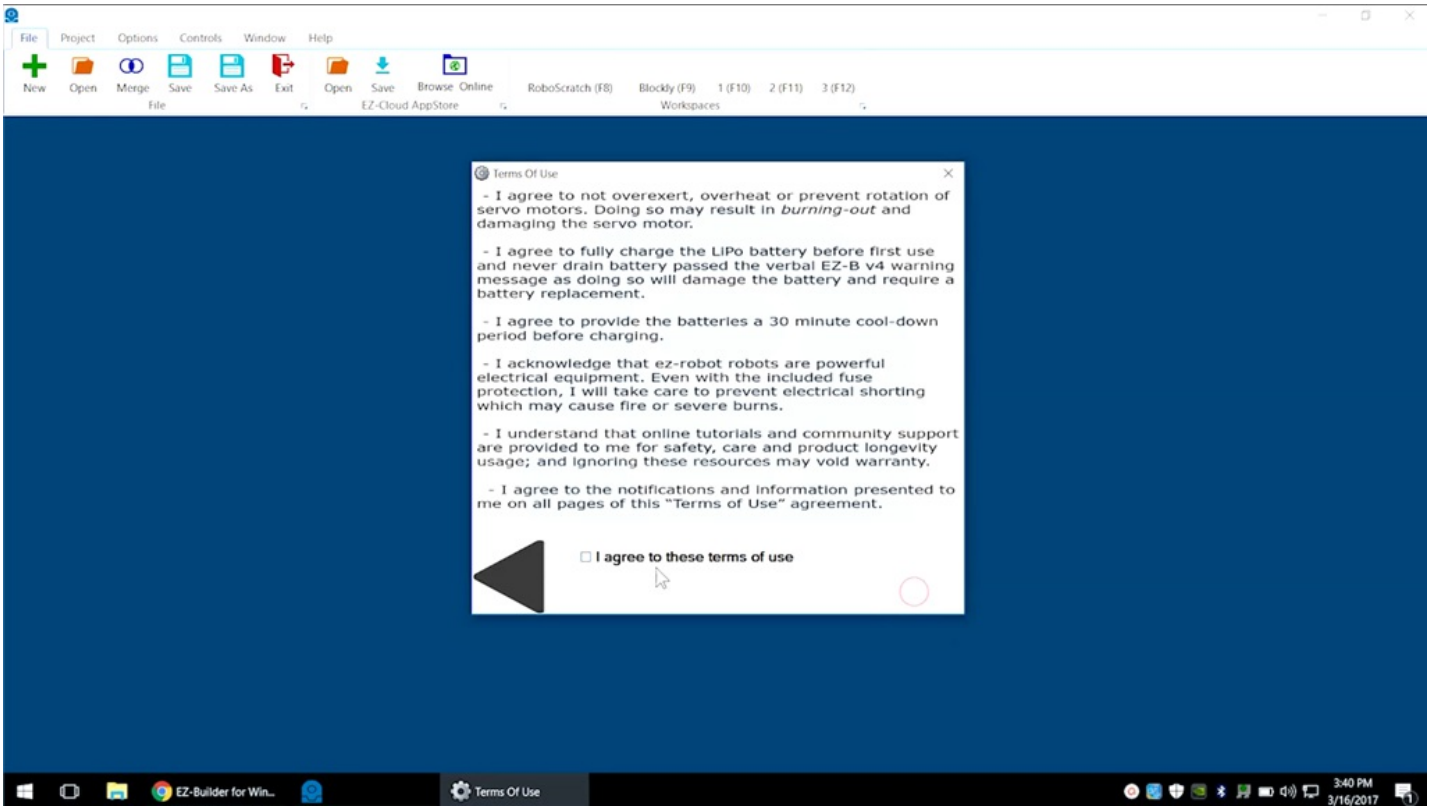
Step 2

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



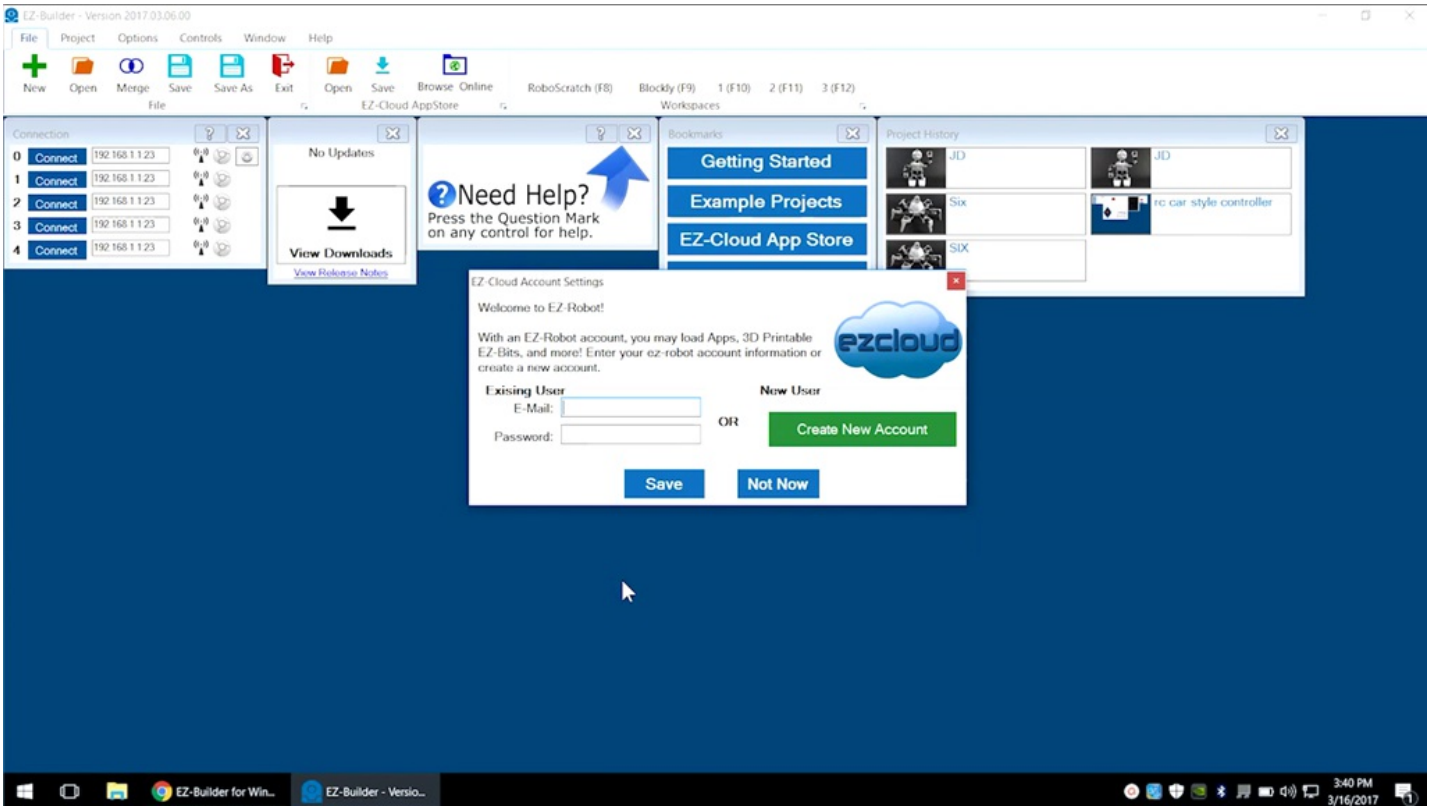
Step 3

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



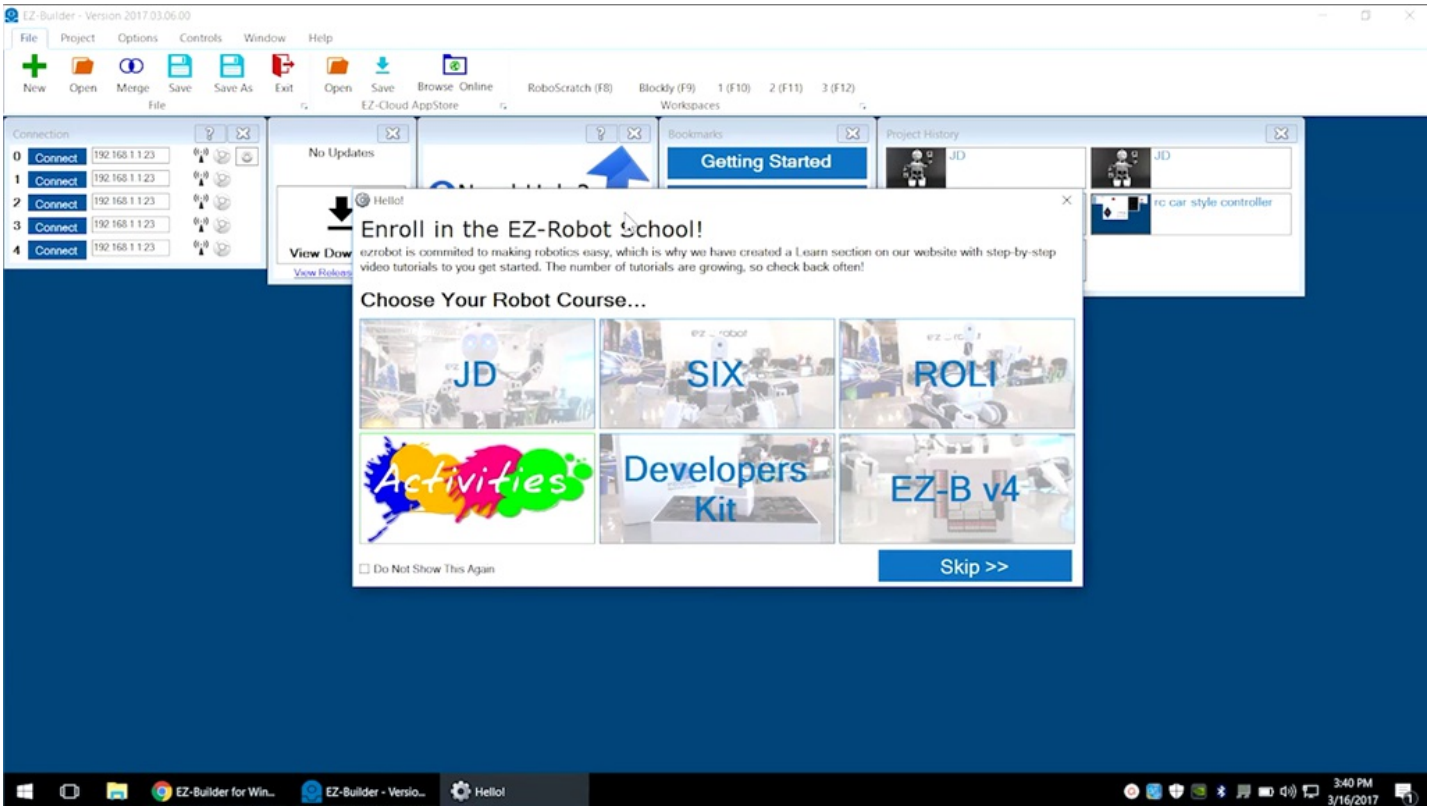
Step 4

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



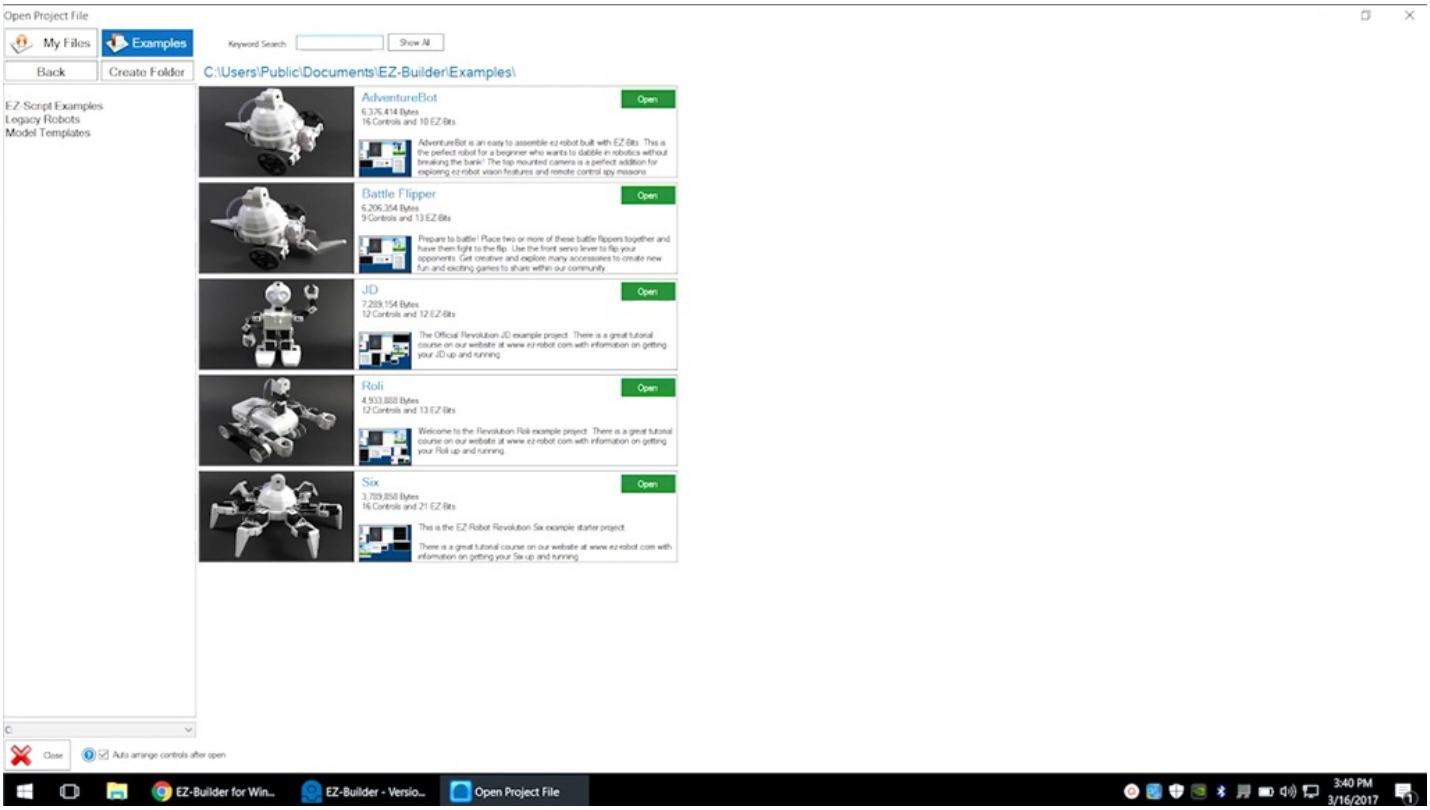
Step 5

Find more tutorials at the **EZ-Robot School**.



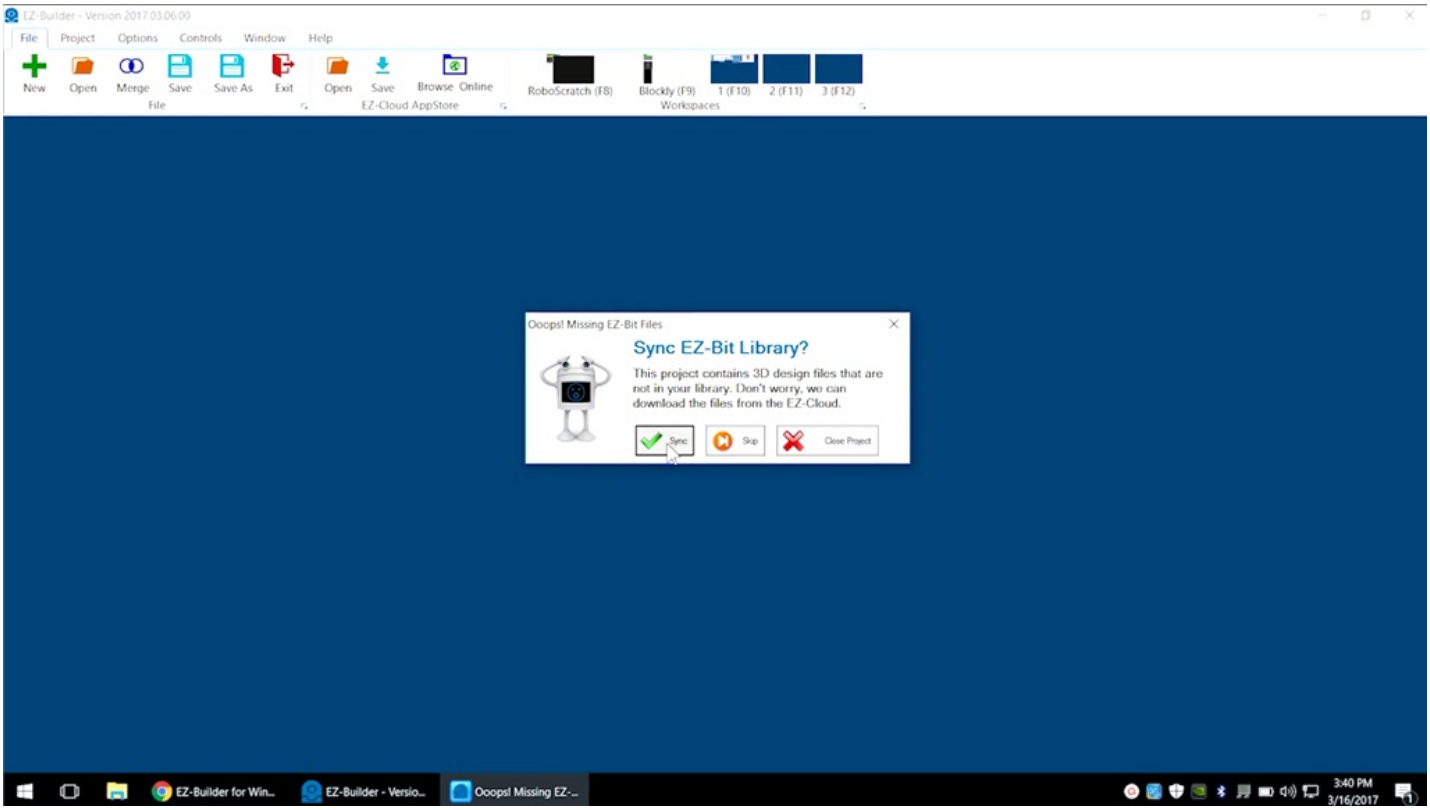
Step 6

Load the **AdventureBot** project from the **Example Projects** menu.



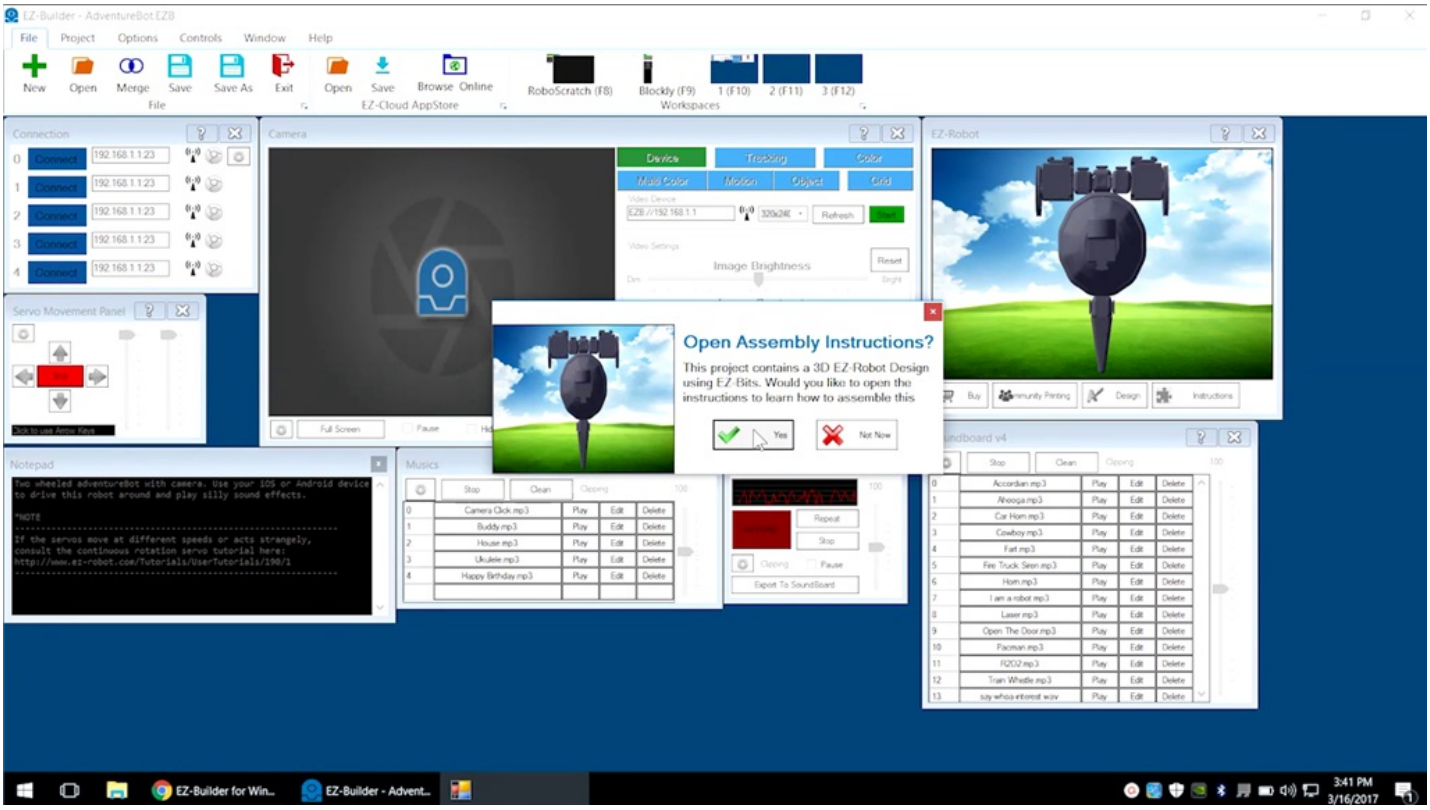
Step 7

EZ-Bits are robot parts. Sync to update the library.



Step 8

Always charge the battery before using **AdventureBot**. Choose **Yes** to open the assembly instructions.

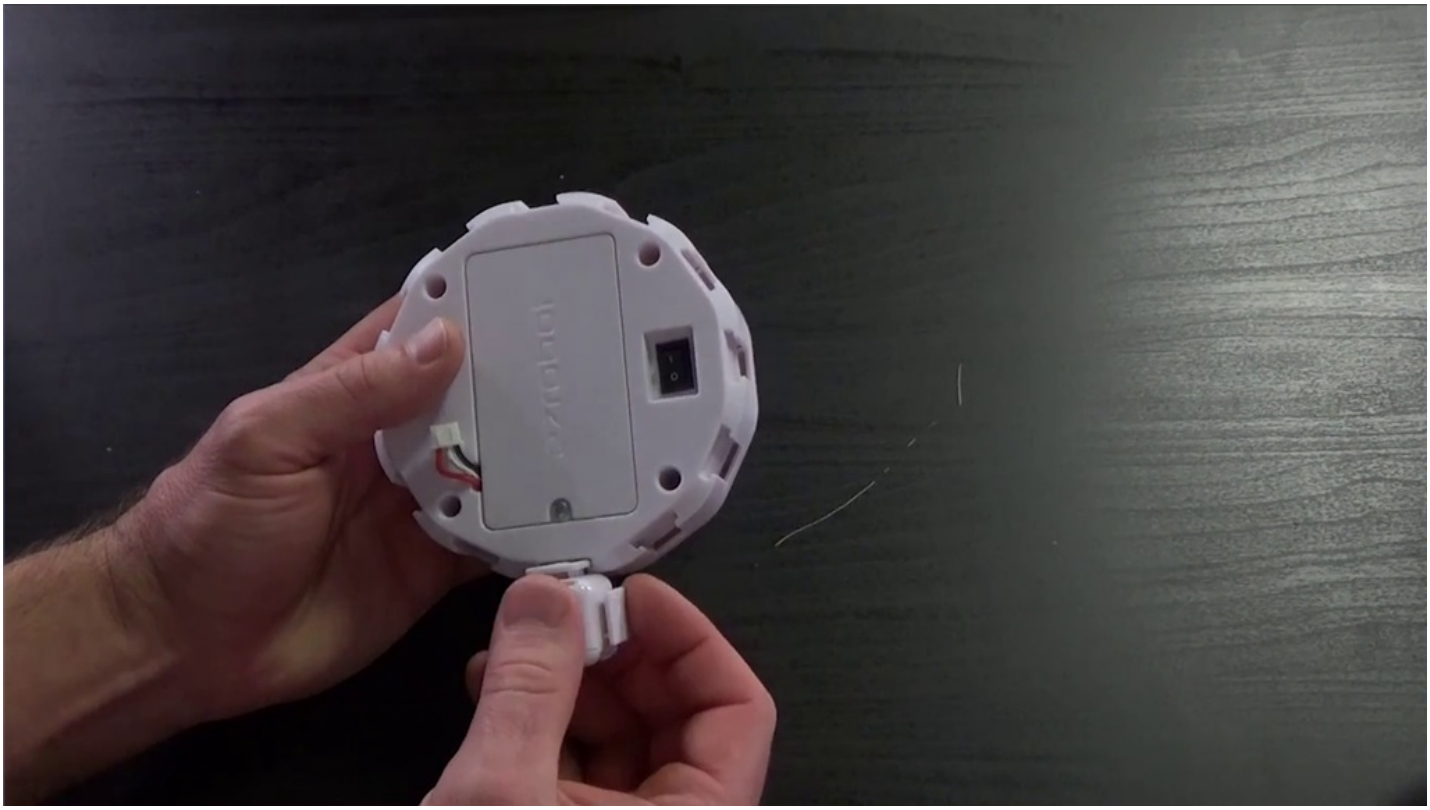


Step 9

Insert **EZ-B** into the **Dodecagon Body**.

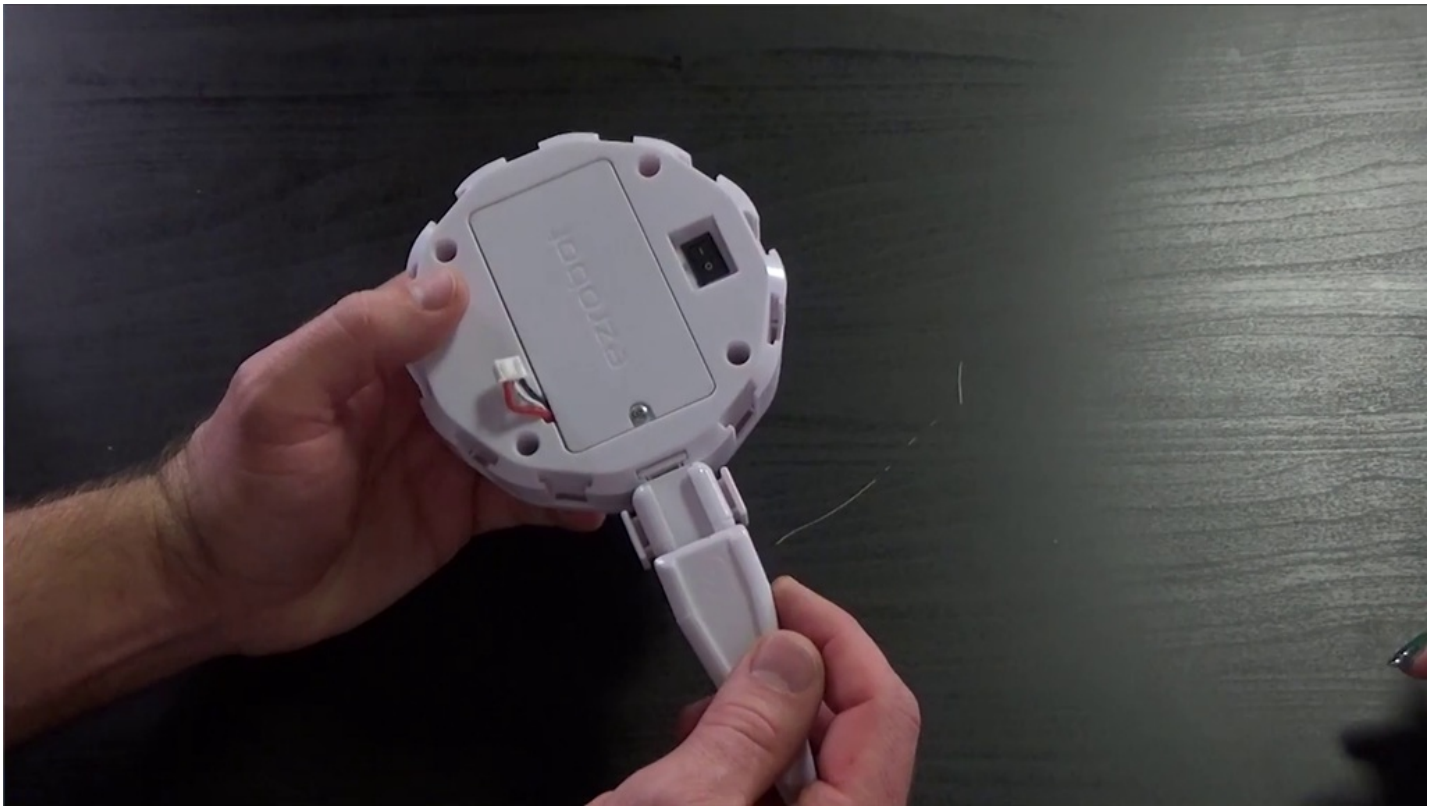
Step 10

Clipâ€™nâ€™Play an **Extension Cube** at the back of the **Dodecagon Body**.



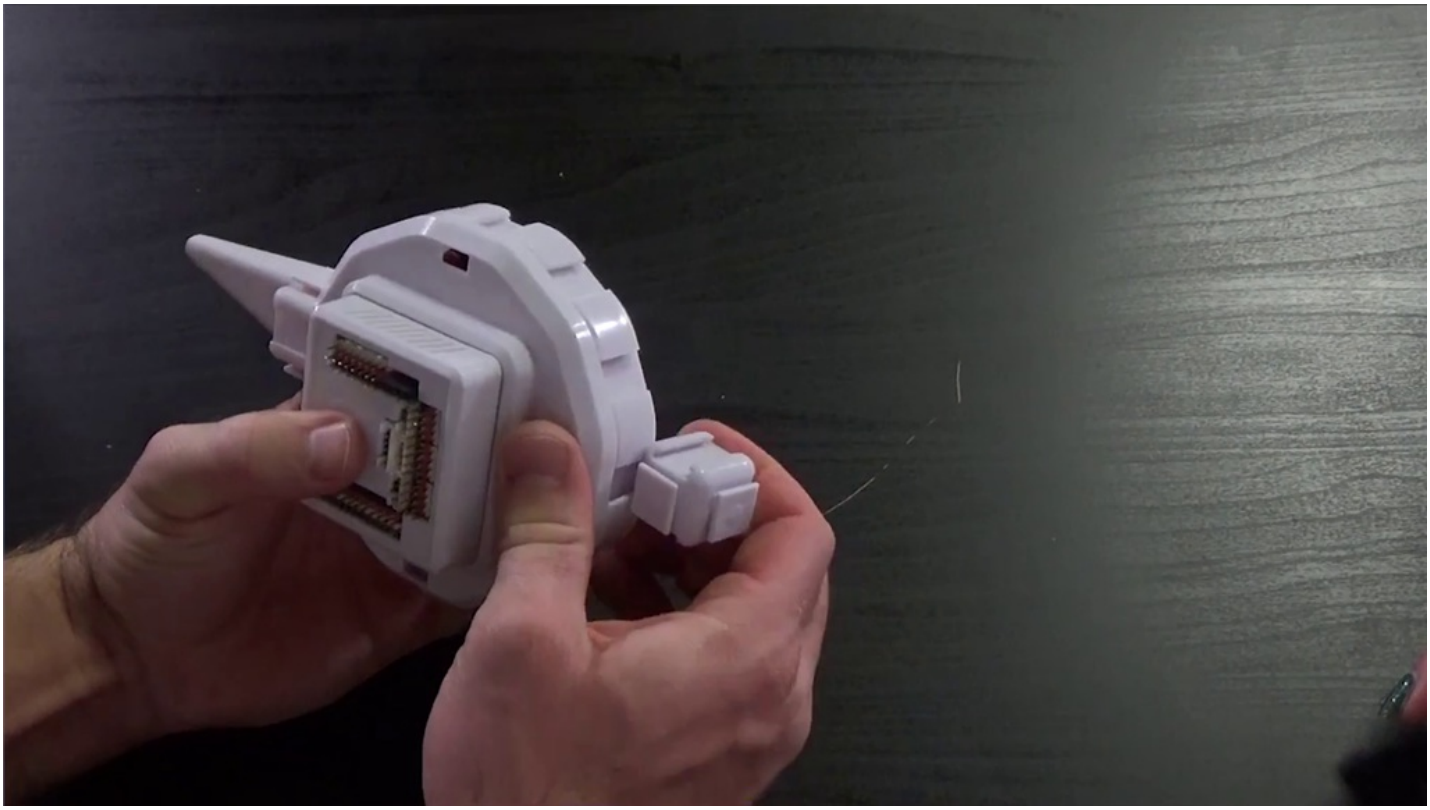
Step 11

Clipâ€™nâ€™Play the **Foot** to the **Extension Cube**.



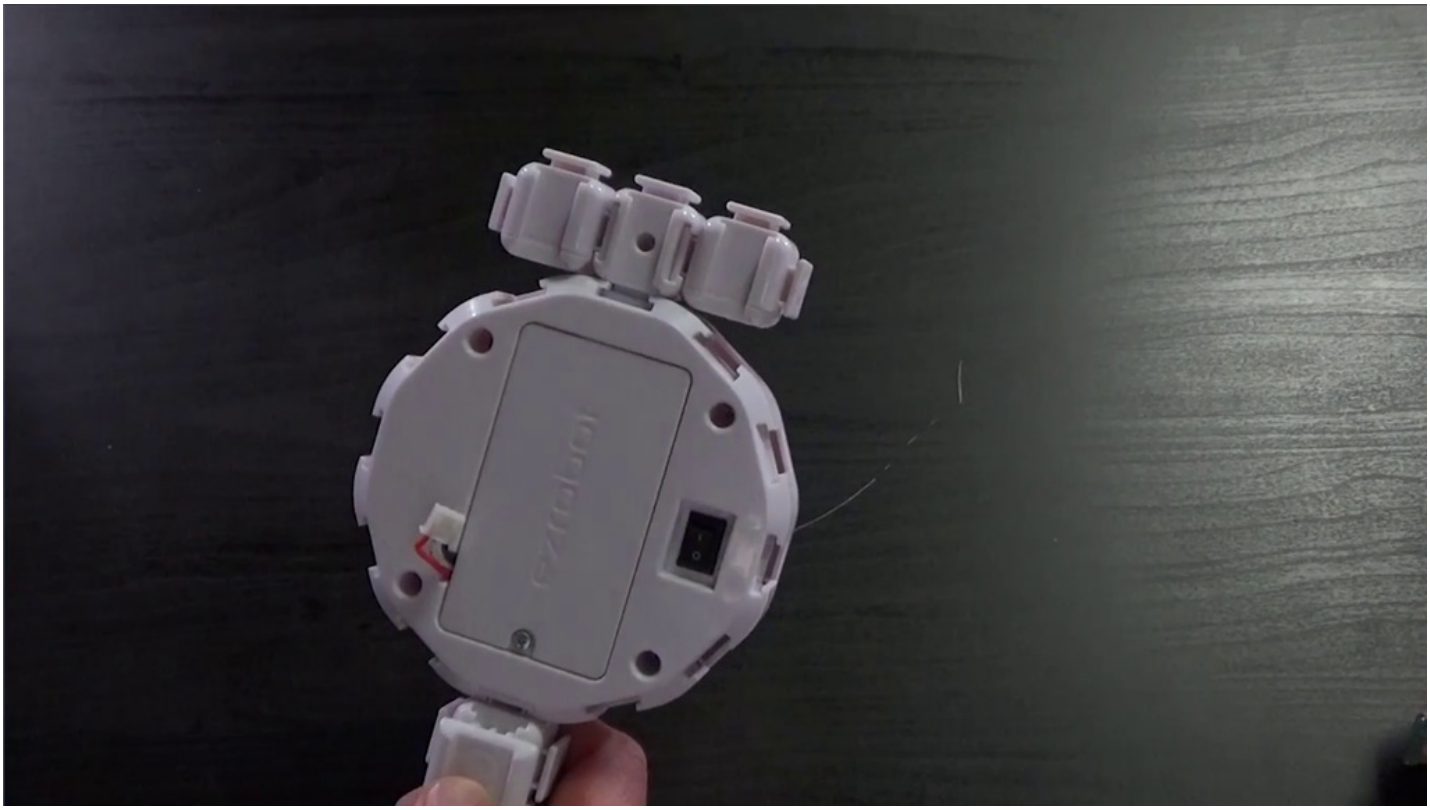
Step 12

Clipâ€™nâ€™Play an **Extension Cube** at the front of the **Dodecagon Body**.



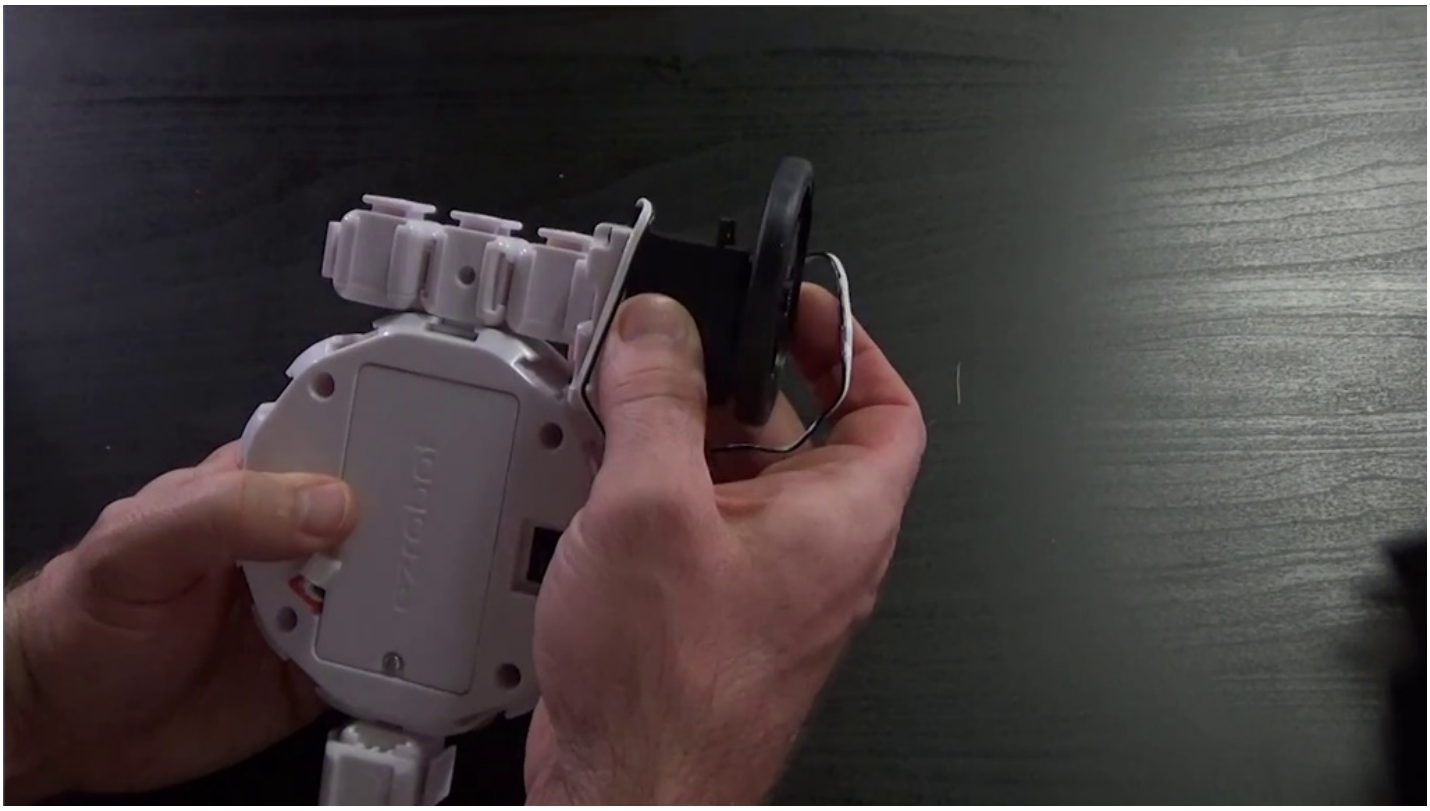
Step 13

Clipâ€™nâ€™Play another **Extension Cube** to each side.



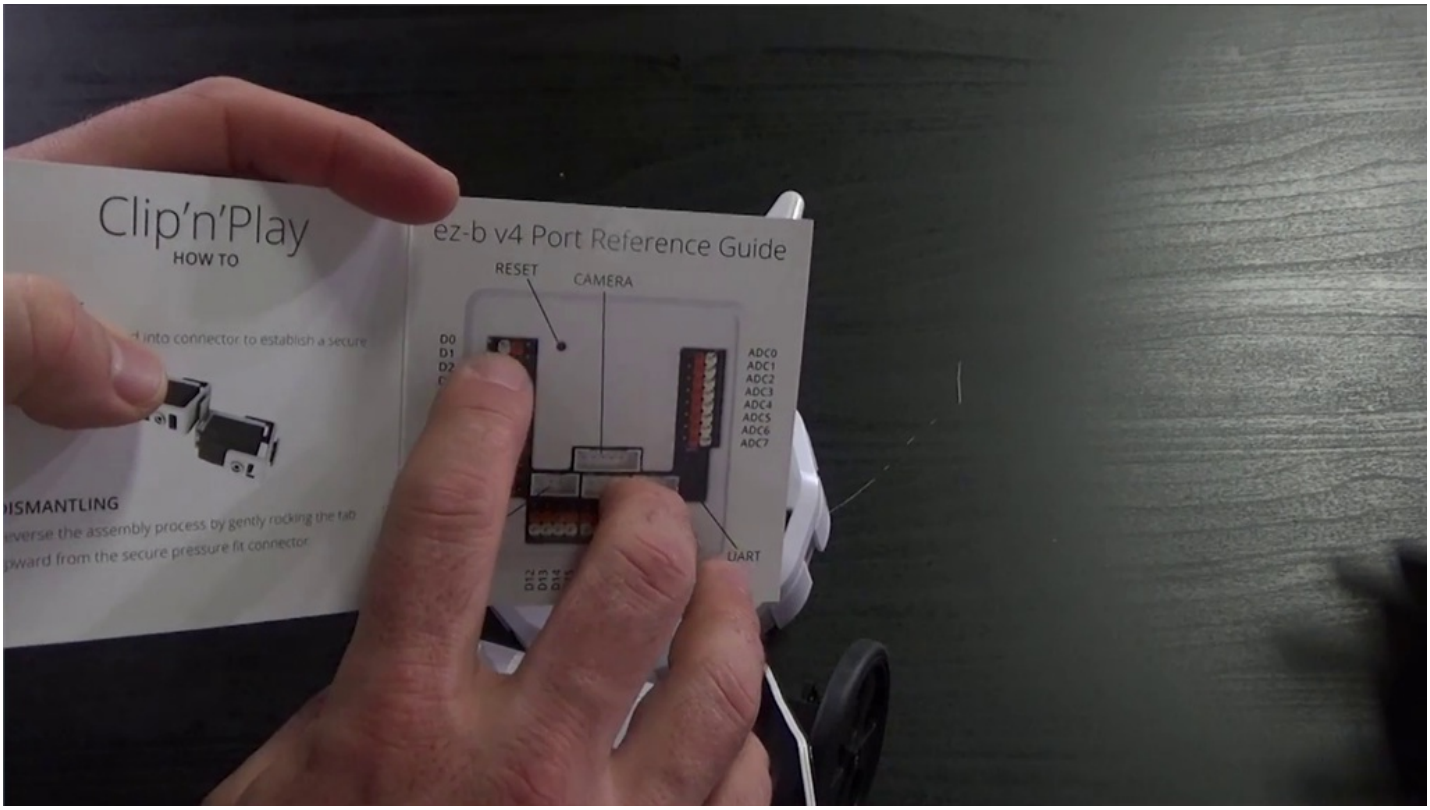
Step 14

Clipâ€™nâ€™Play a **Continuous Rotation Servo** to the left **Extension Cube** with the white bracket toward the inside.



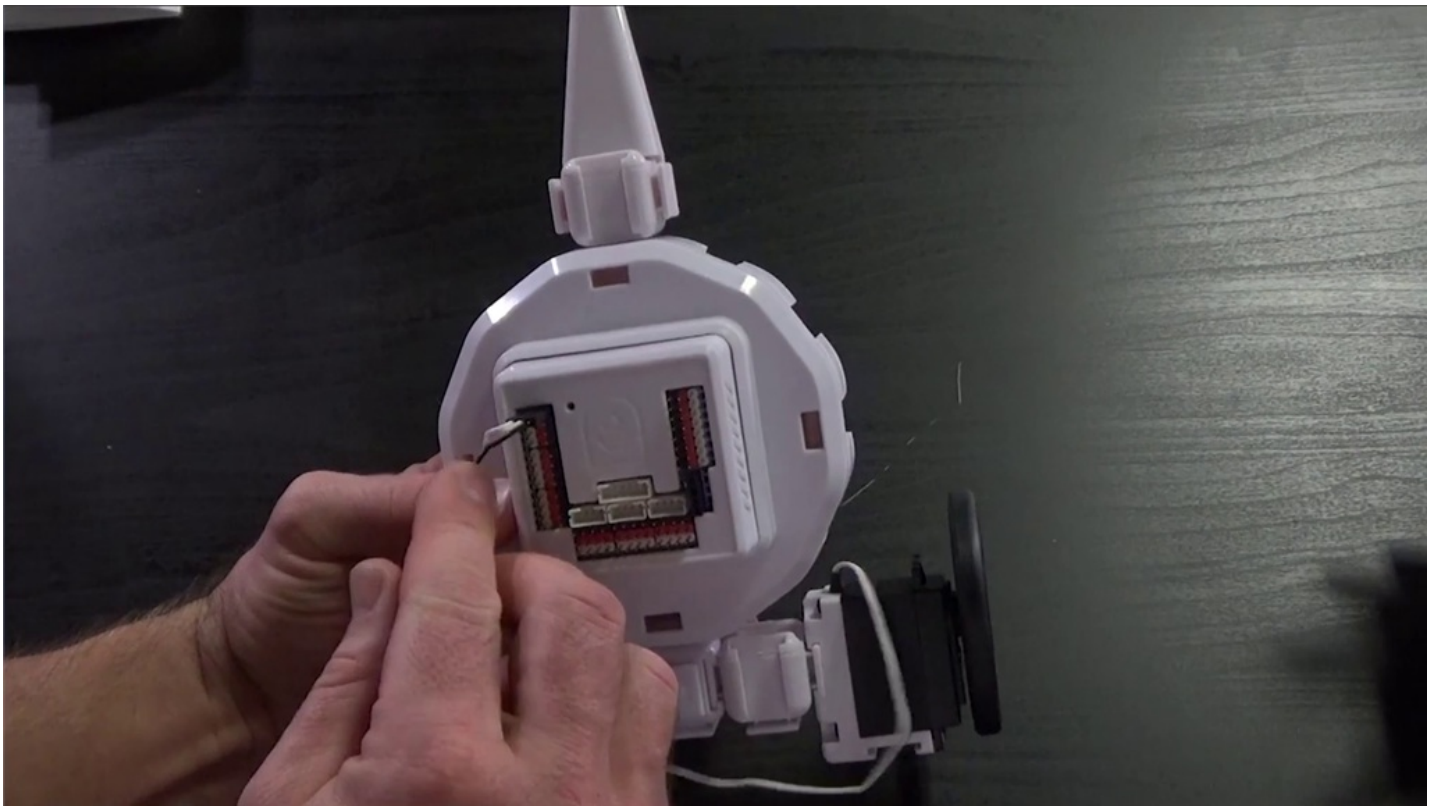
Step 15

Connect the servo to **D0**.



Step 16

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

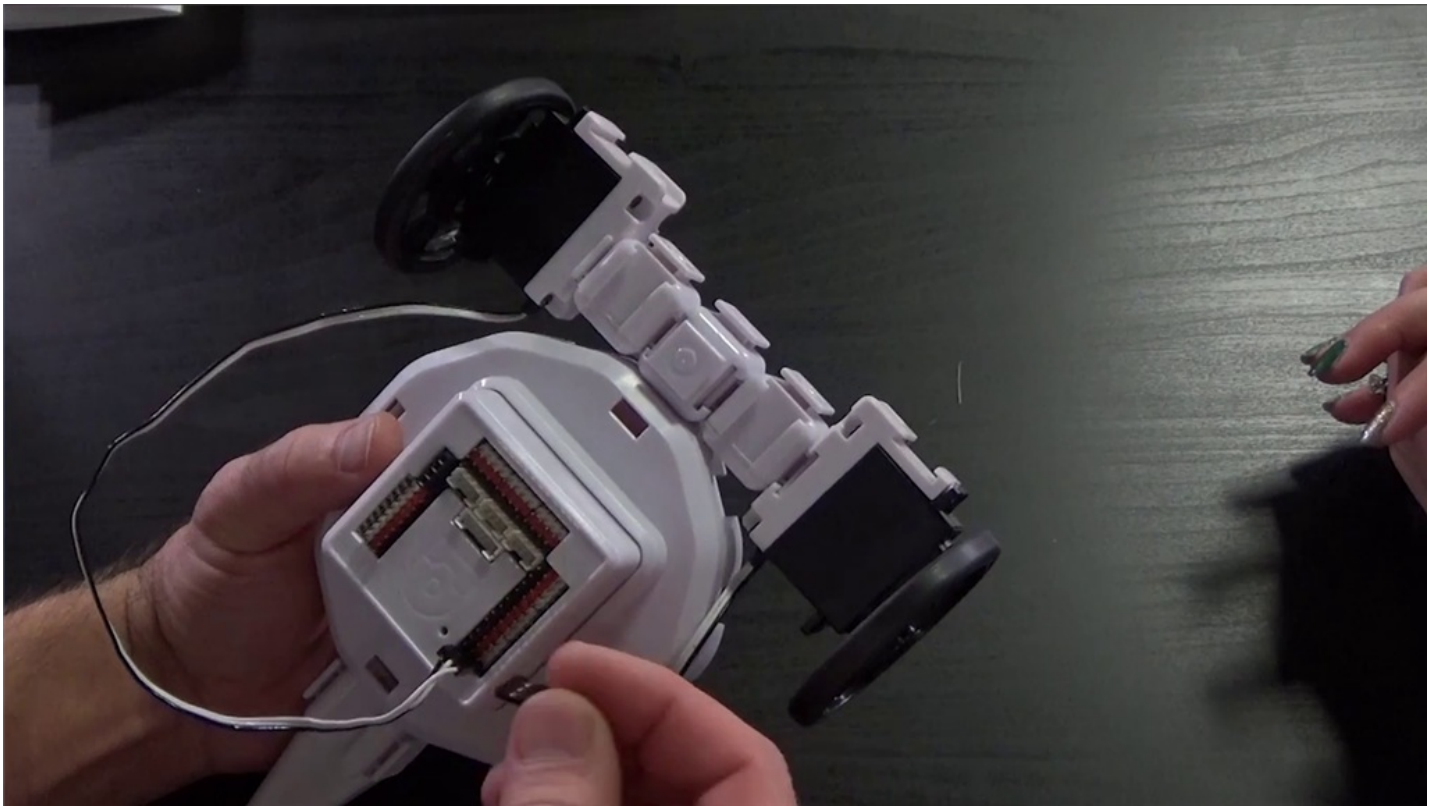


Step 17

Clipâ€™nâ€™Play a **Continuous Rotation Servo** to the right **Extension Cube** with the white bracket toward the inside.

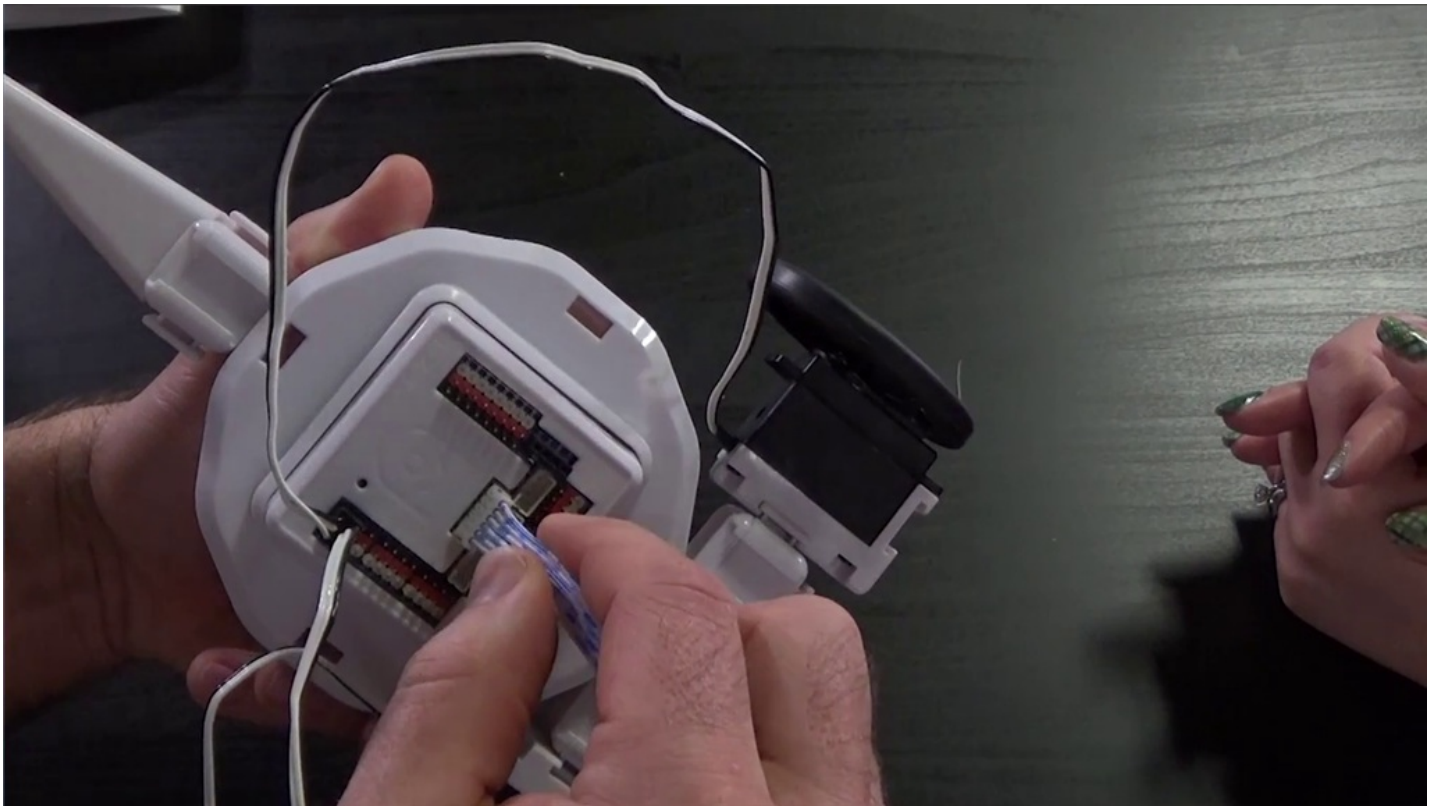
Step 18

Connect the servo to **D1**.



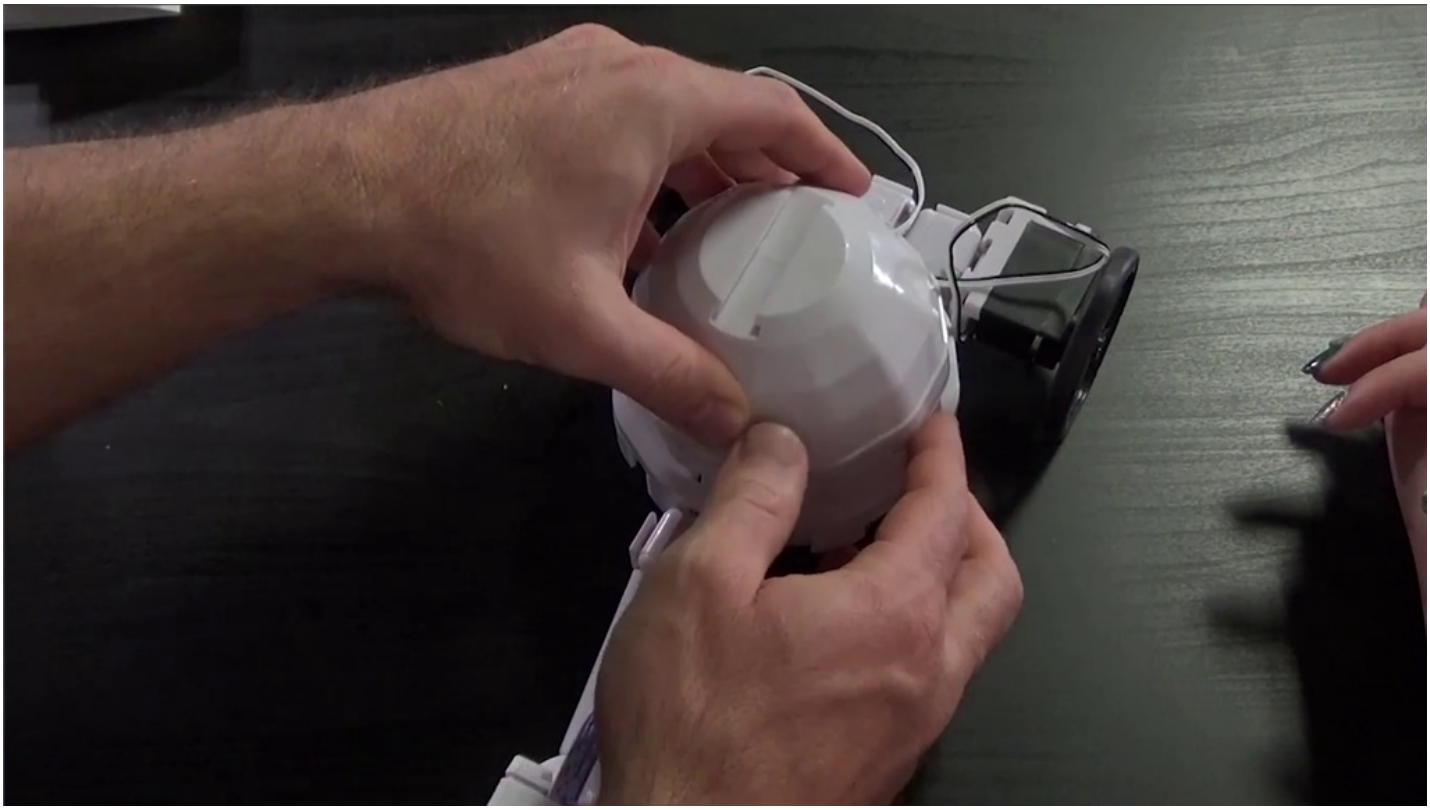
Step 19

Connect the **Camera** cable to the camera port.



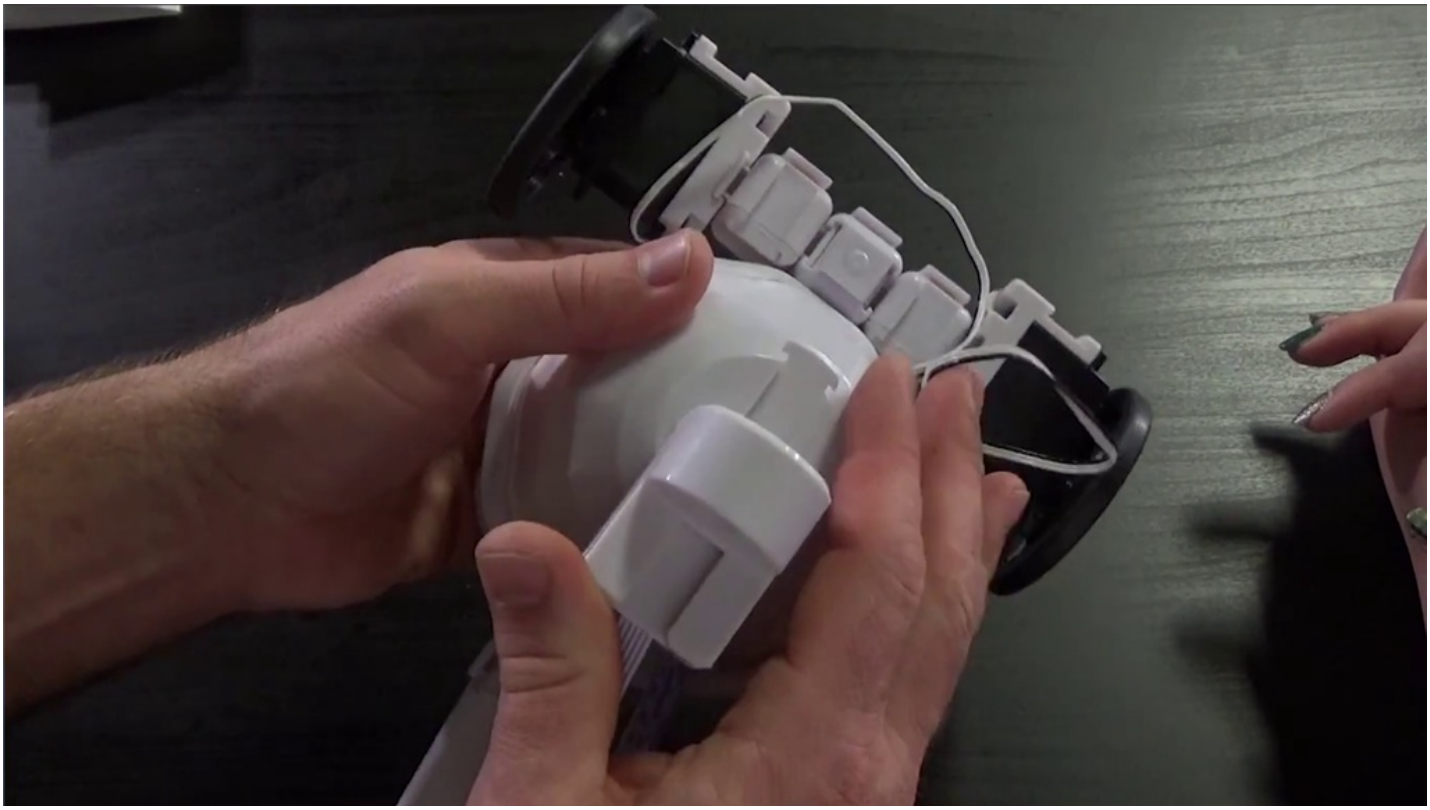
Step 20

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



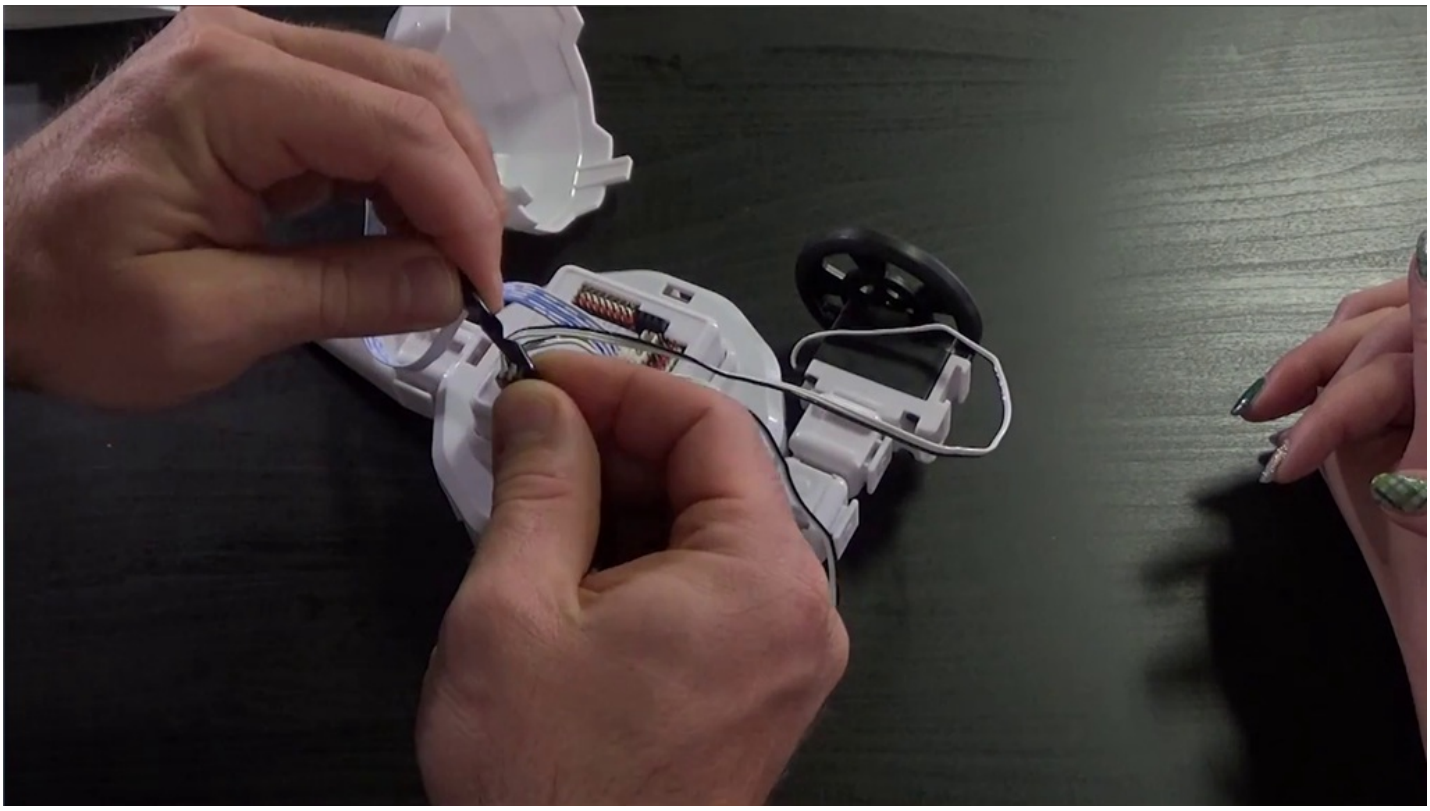
Step 21

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



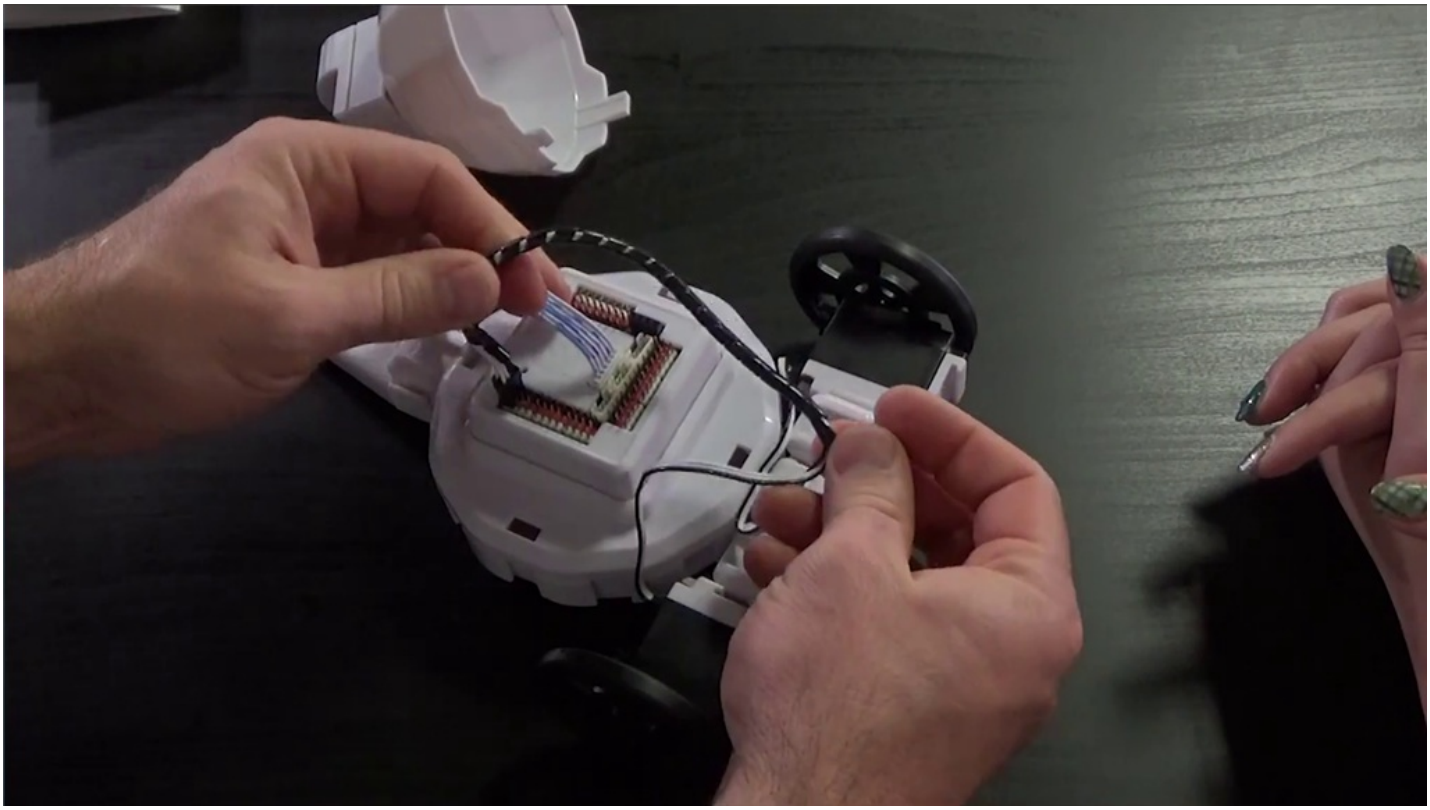
Step 22

Use **Wire Wraps** to organize cables. Begin wrapping near the **EZ-B** and wrap downwards toward the servos.



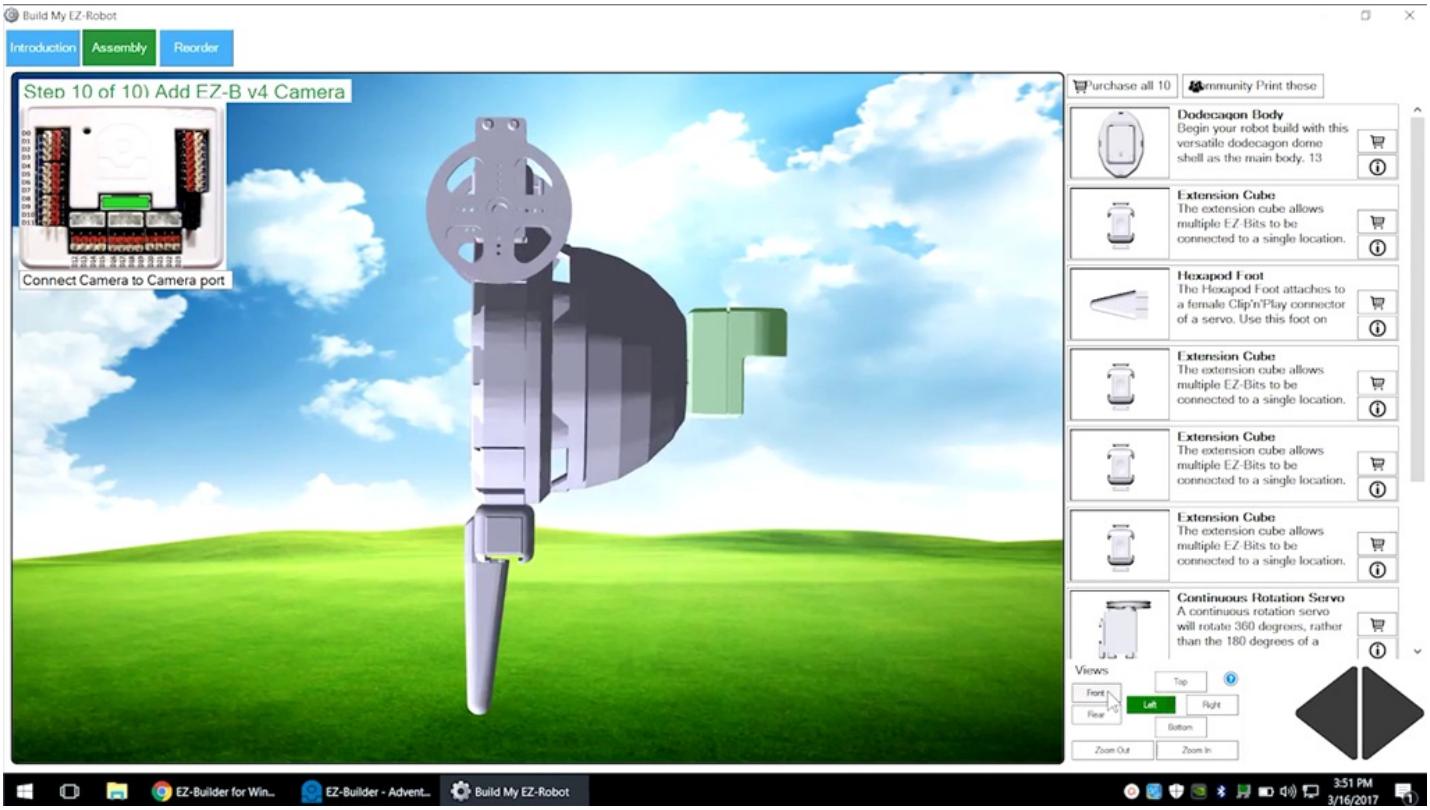
Step 23

Leave cable slack near servos for full range of motion.



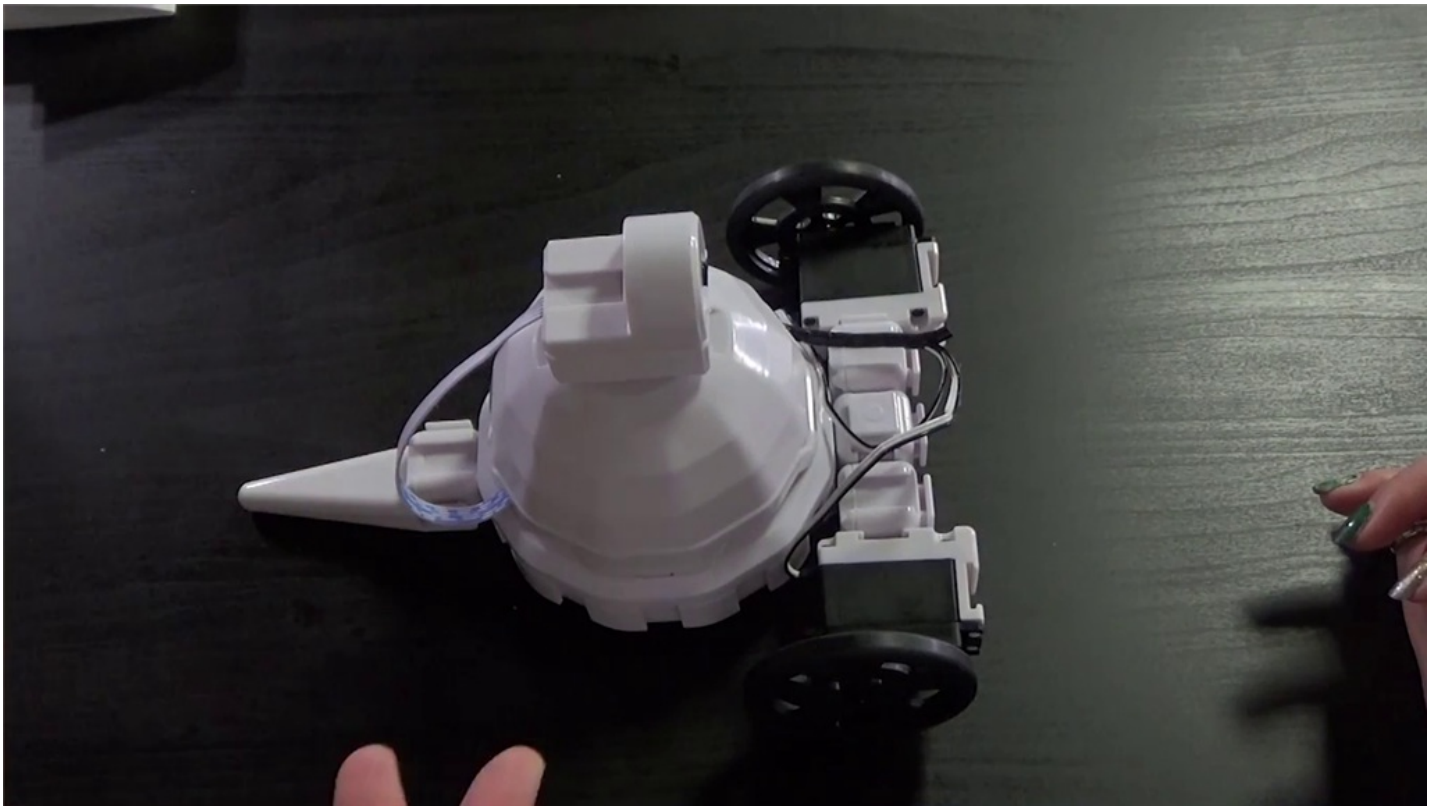
Step 24

Use the 3D view buttons to check all angles.



Step 25

Your **Revolution AdventureBot** is now complete!



Quiz

Question #1 AdventureBotâ€™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/82.

Visit www.TheRobotProgram.com for more episodes.