

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

⑤ 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

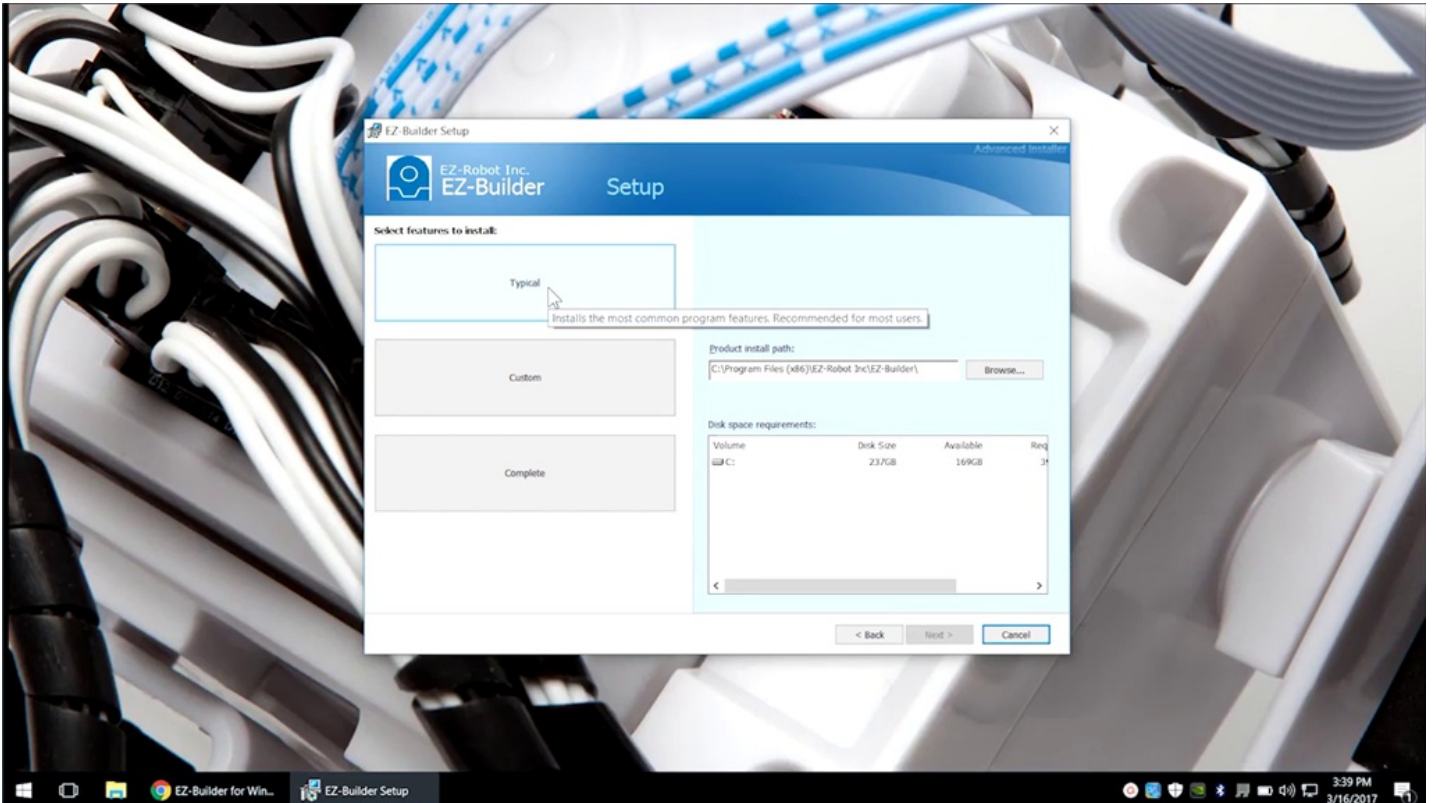
Download **EZ-Builder** from ez-robot.com.



The screenshot shows a web browser window displaying the EZ-Builder website for Windows. The browser's address bar shows the URL www.ez-robot.com/EZ-Builder/. The website has a blue header with the EZ-robot logo and navigation links: Explore, Products, Software (selected), Learn, and Community. A secondary navigation bar lists categories: Windows, Plugins, Mobile, UniversalBot, Windows SDK, Mono SDK, and 3rd Party. The main content area features a large blue banner with the title "EZ-Builder For Windows". Below the title is a video player with the text "The EZ-Life... All The Robots!" and a play button. To the right of the video are two buttons: "Download EZ-Builder Installer.msi" (highlighted in green) and "Manual". Below these buttons are "Release notes" and the text "EZ-Builder Version 2017.03.06.00". A descriptive paragraph follows: "The software for robots! World's easiest and most powerful robot software designed for EZ-Robots and more. Scales between beginner and advanced users, this software introduces amazing features that will bring your robot to life by combining engineering and creativity." At the bottom of the browser window, a taskbar shows the Windows logo, a taskbar with icons for EZ-Builder Installer and EZ-Builder for Win..., and a system tray with the time 3:38 PM and date 3/16/2017.

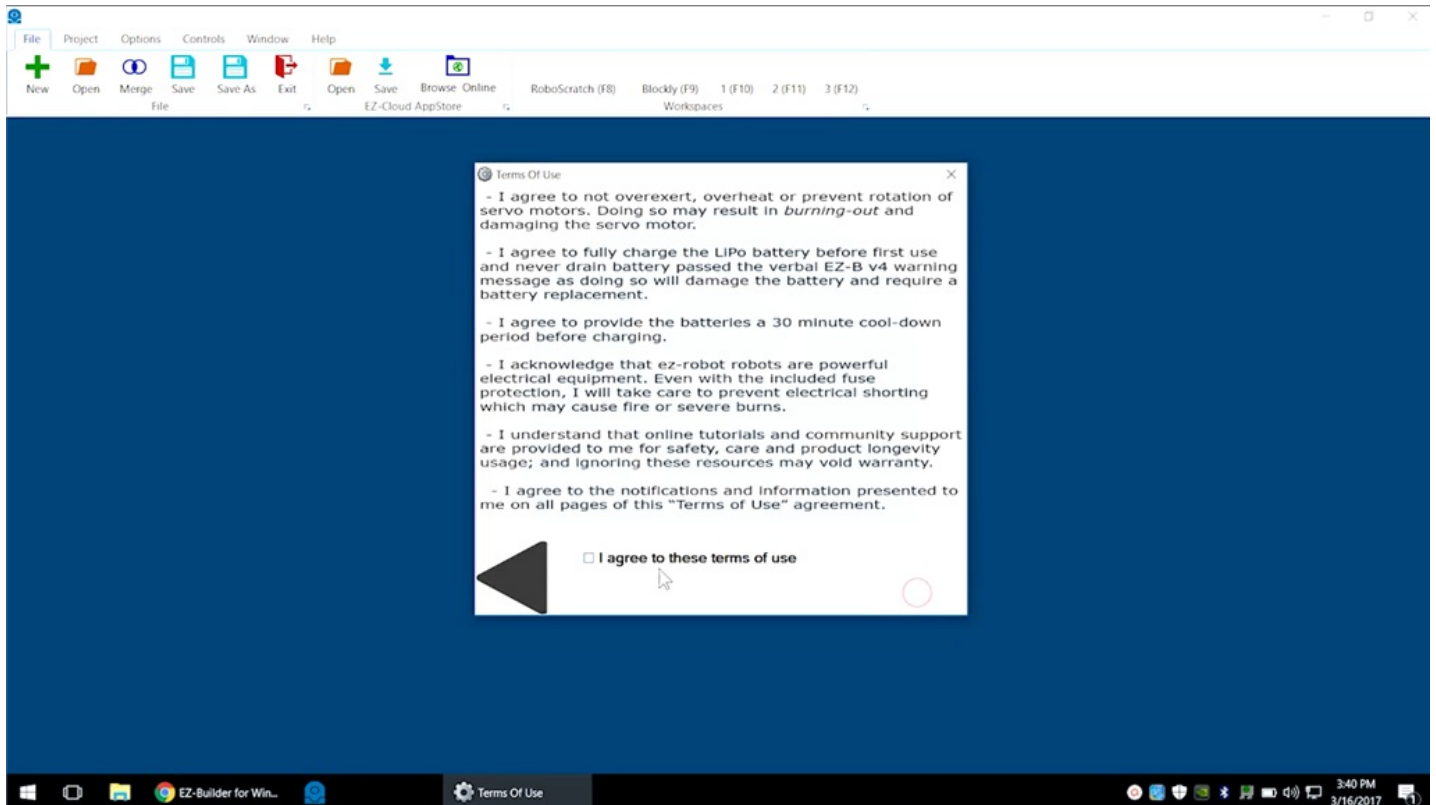
Step 2

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



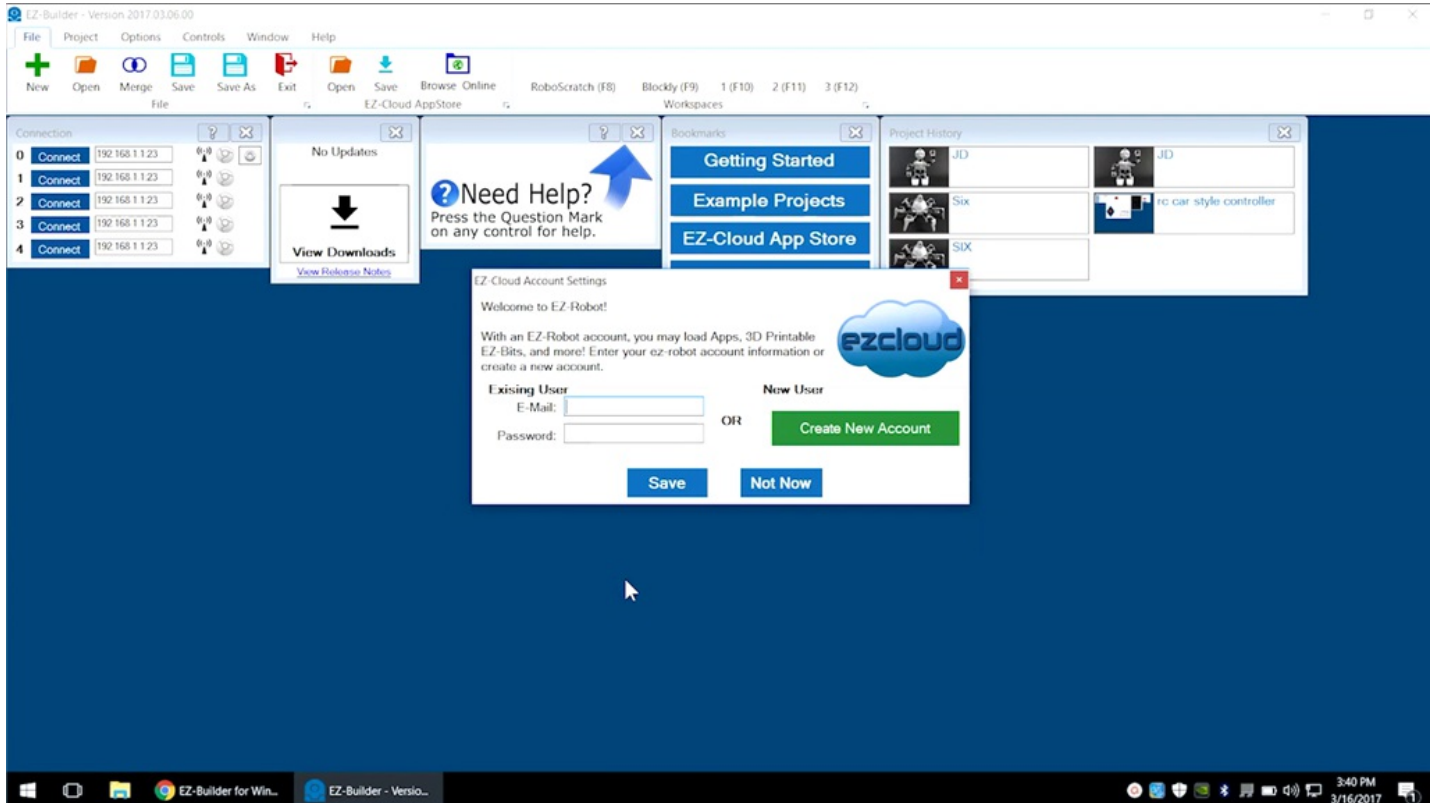
Step 3

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



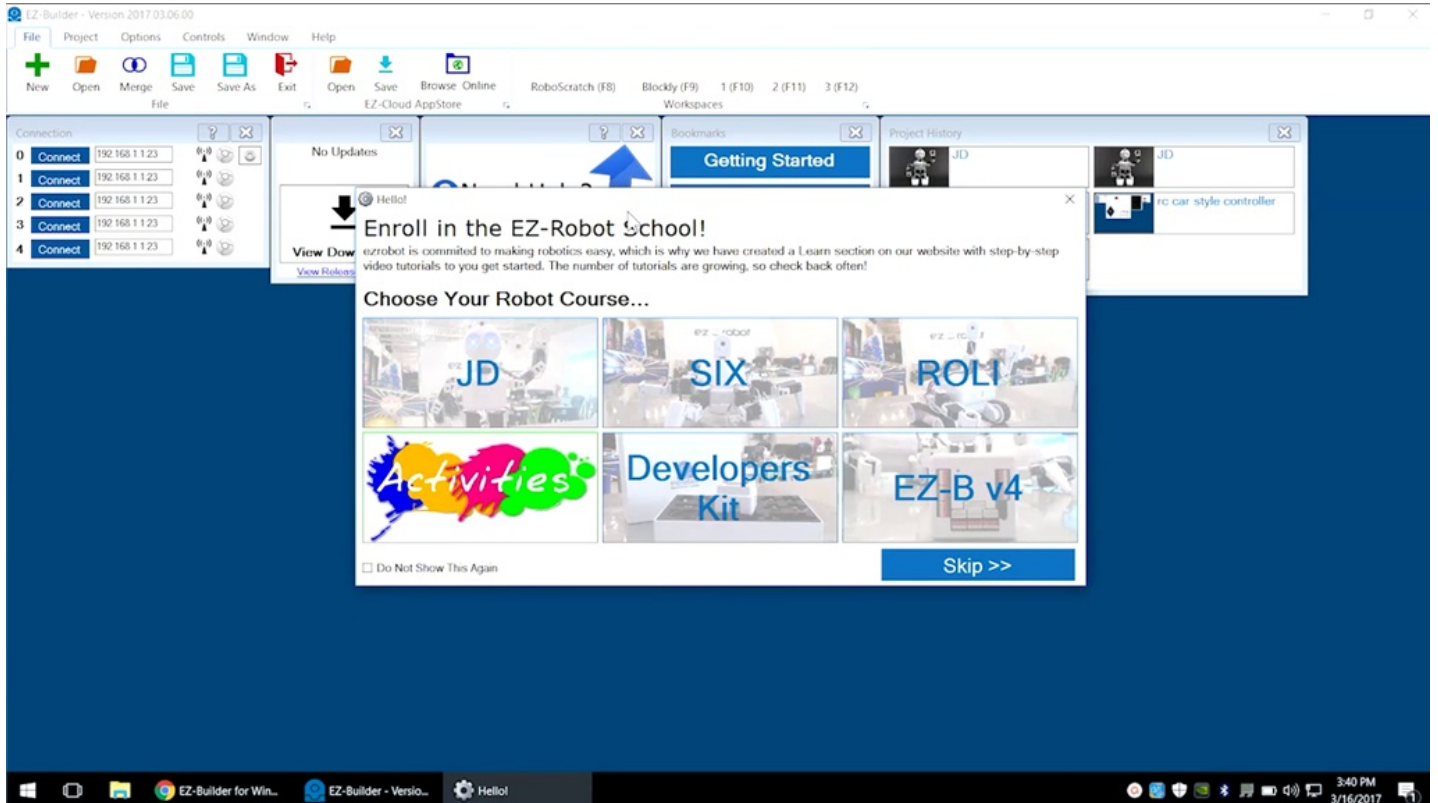
Step 4

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



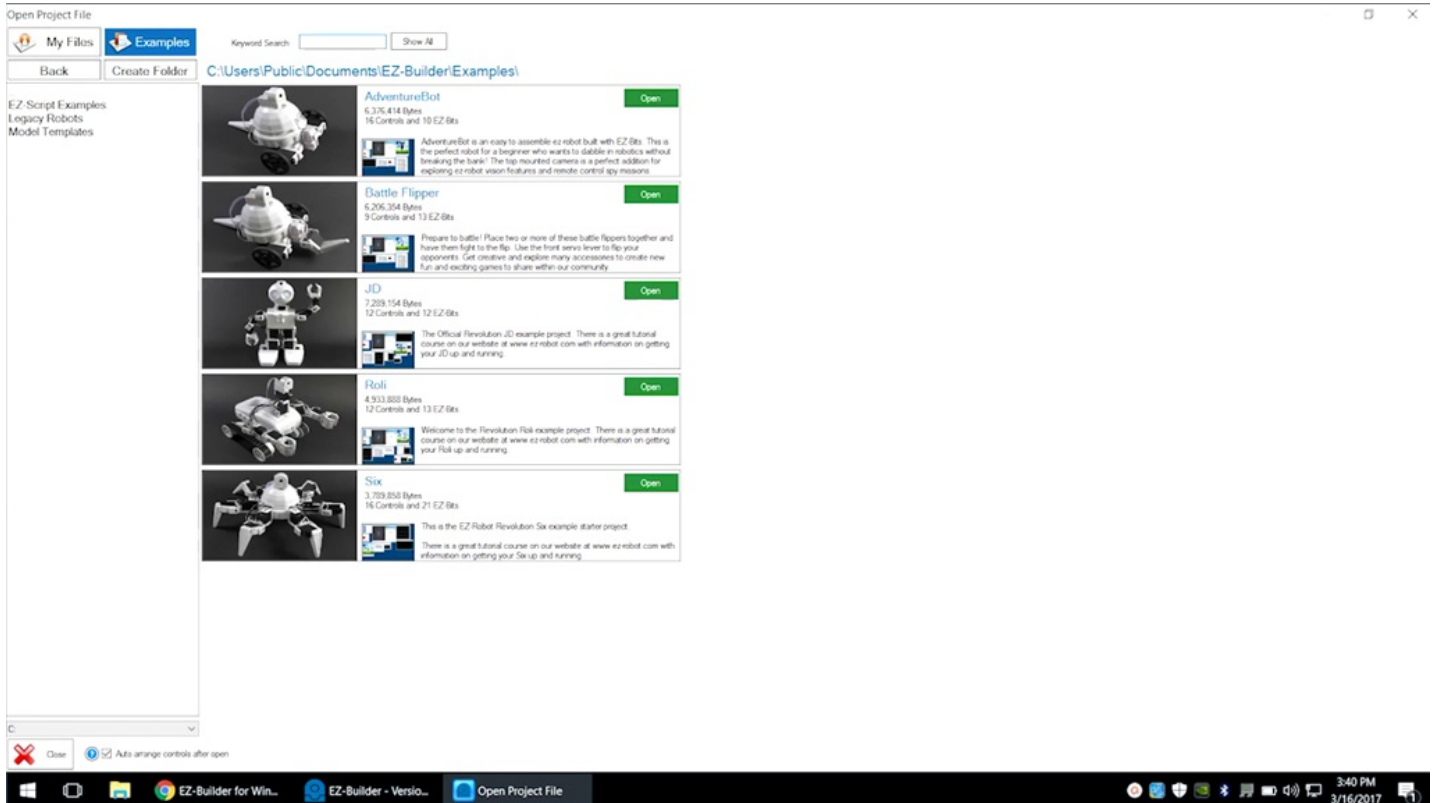
Step 5

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



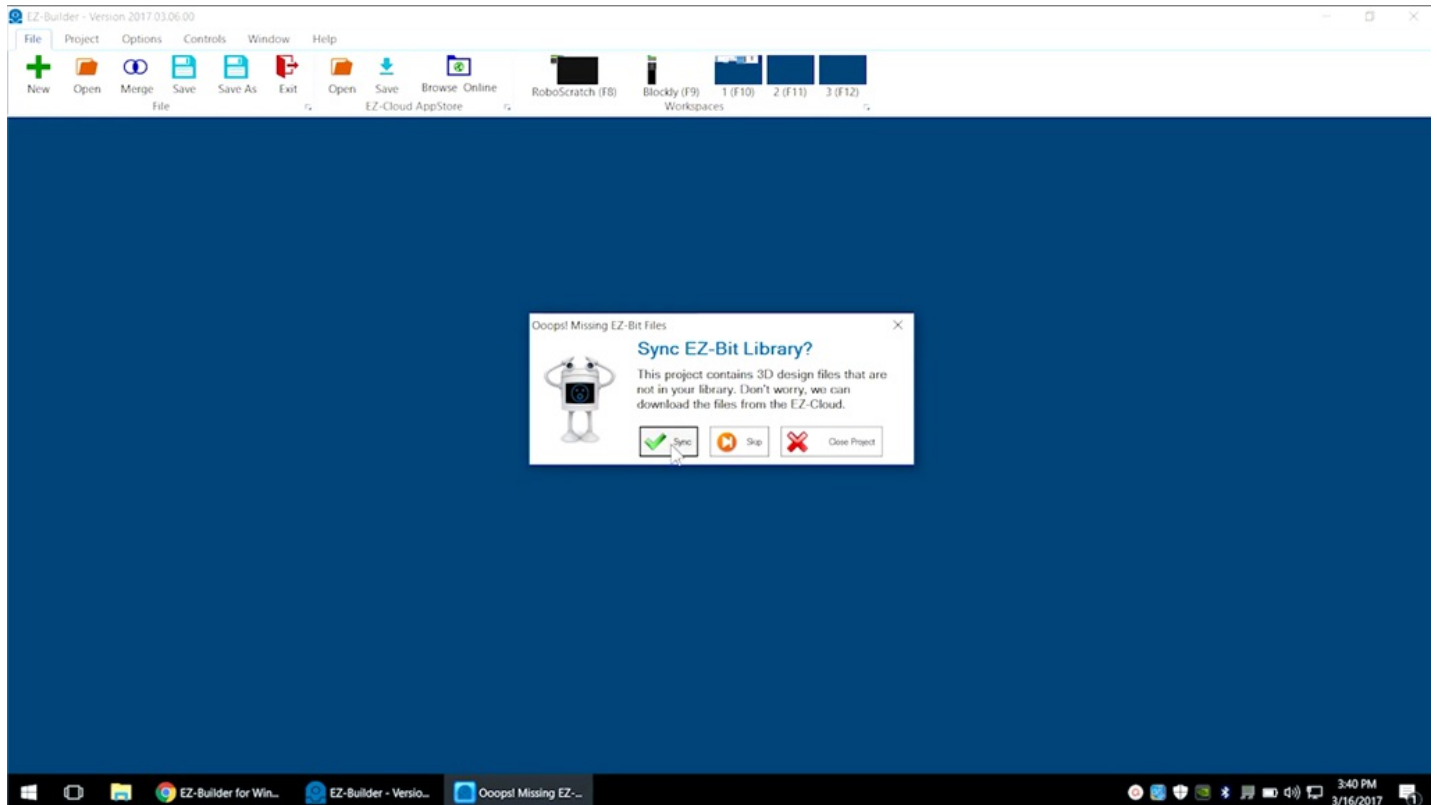
Step 6

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.

The screenshot displays the EZ-Builder software interface for AdventureBot. The interface includes a menu bar (File, Project, Options, Controls, Window, Help), a toolbar with icons for New, Open, Merge, Save, Save As, Exit, Open, Save, Browse Online, EZ-Cloud AppStore, RoboScratch (F8), Blockly (F9), and Workspaces (1 (F10), 2 (F11), 3 (F12)). The main workspace is divided into several panels: 'Connection' (listing 5 COM ports at 192.168.1.123), 'Camera' (showing a camera feed of a robot on a green field), 'EZ-Robot' (showing a 3D model of the robot), 'Servo Movement Panel' (with sliders for servo positions), 'Notepad' (containing text about the robot and a URL), 'Musics' (a table of music files), and 'Soundboard v4' (a list of sound effects). A central dialog box asks 'Open Assembly Instructions?' with 'Yes' and 'Not Now' buttons. The Windows taskbar at the bottom shows the time as 3:41 PM on 3/16/2017.

Index	File Name	Play	Edit	Delete
0	Camera Click.mp3	Play	Edit	Delete
1	Bully.mp3	Play	Edit	Delete
2	House.mp3	Play	Edit	Delete
3	Mule.mp3	Play	Edit	Delete
4	Happy Birthday.mp3	Play	Edit	Delete

Index	File Name	Play	Edit	Delete
0	Accordion.mp3	Play	Edit	Delete
1	Altooga.mp3	Play	Edit	Delete
2	Car Horn.mp3	Play	Edit	Delete
3	Cowboy.mp3	Play	Edit	Delete
4	Fat.mp3	Play	Edit	Delete
5	Fee Truck Seen.mp3	Play	Edit	Delete
6	Ham.mp3	Play	Edit	Delete
7	I am a robot.mp3	Play	Edit	Delete
8	Laser.mp3	Play	Edit	Delete
9	Open The Door.mp3	Play	Edit	Delete
10	Pacman.mp3	Play	Edit	Delete
11	R2D2.mp3	Play	Edit	Delete
12	Train Whistle.mp3	Play	Edit	Delete
13	say who's internet wiv	Play	Edit	Delete

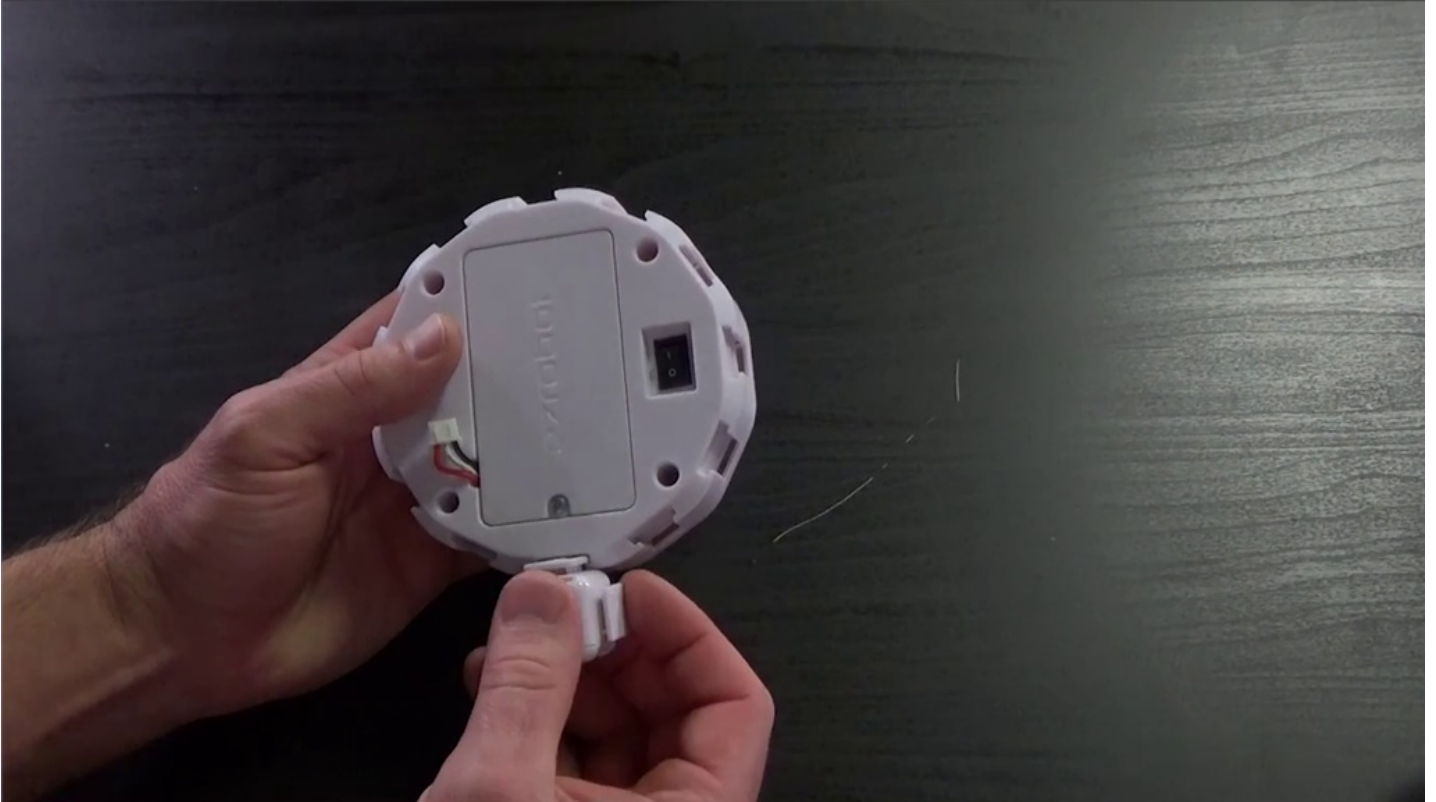
Step 9

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



Step 10

Clip an **Extension Cube** at the back of the **Dodecagon Body**.



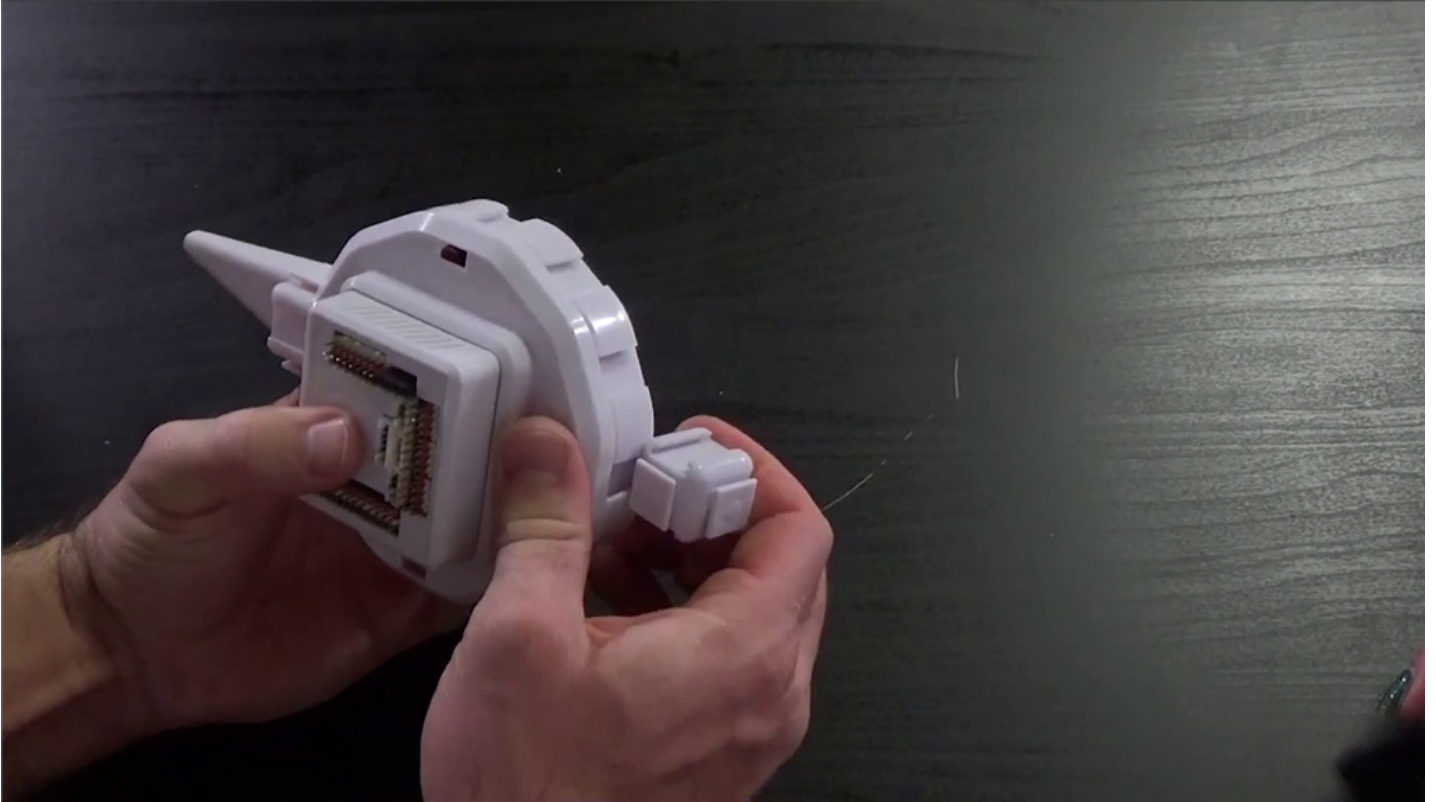
Step 11

Clip the Play the Foot to the Extension Cube.



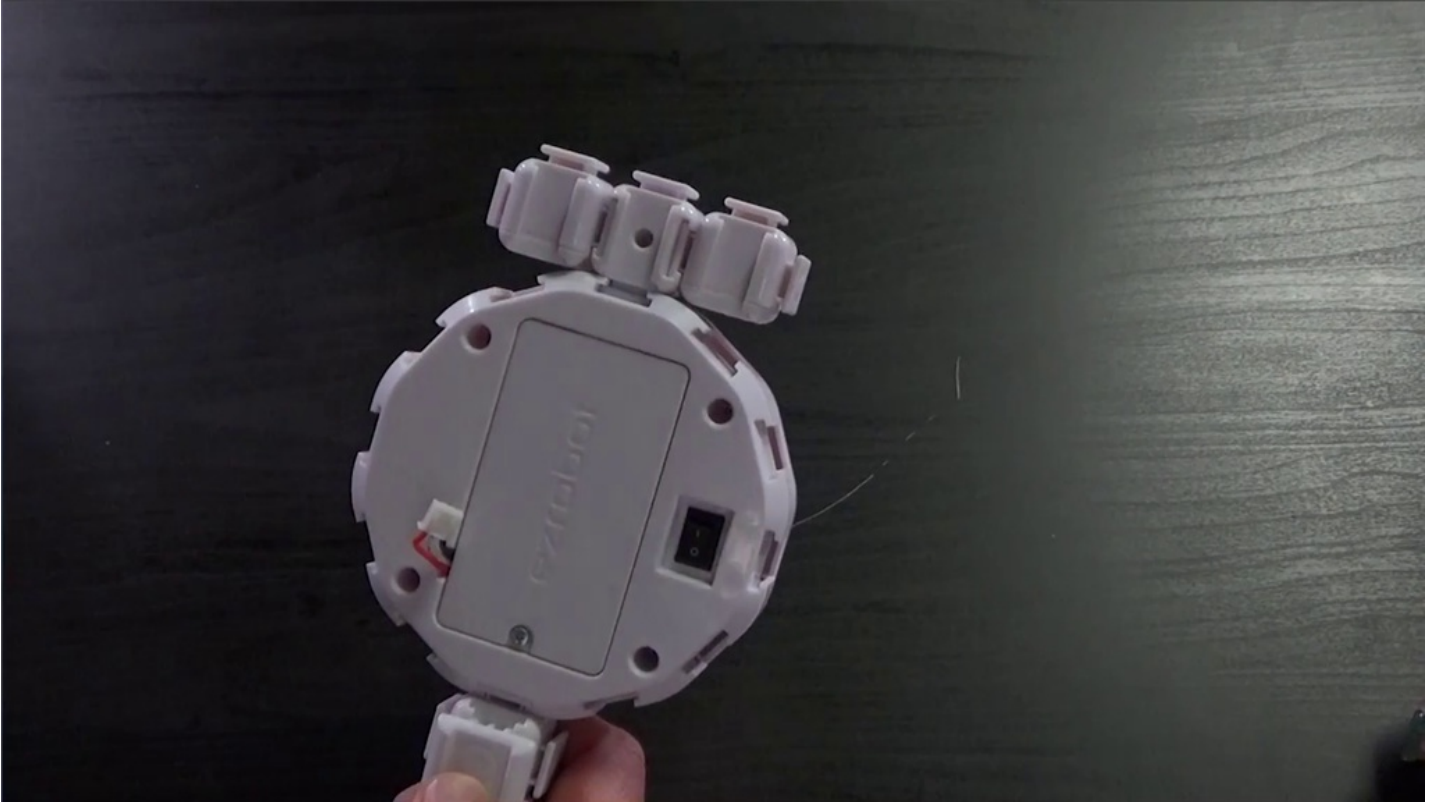
Step 12

Clip an Extension Cube at the front of the Dodecagon Body.



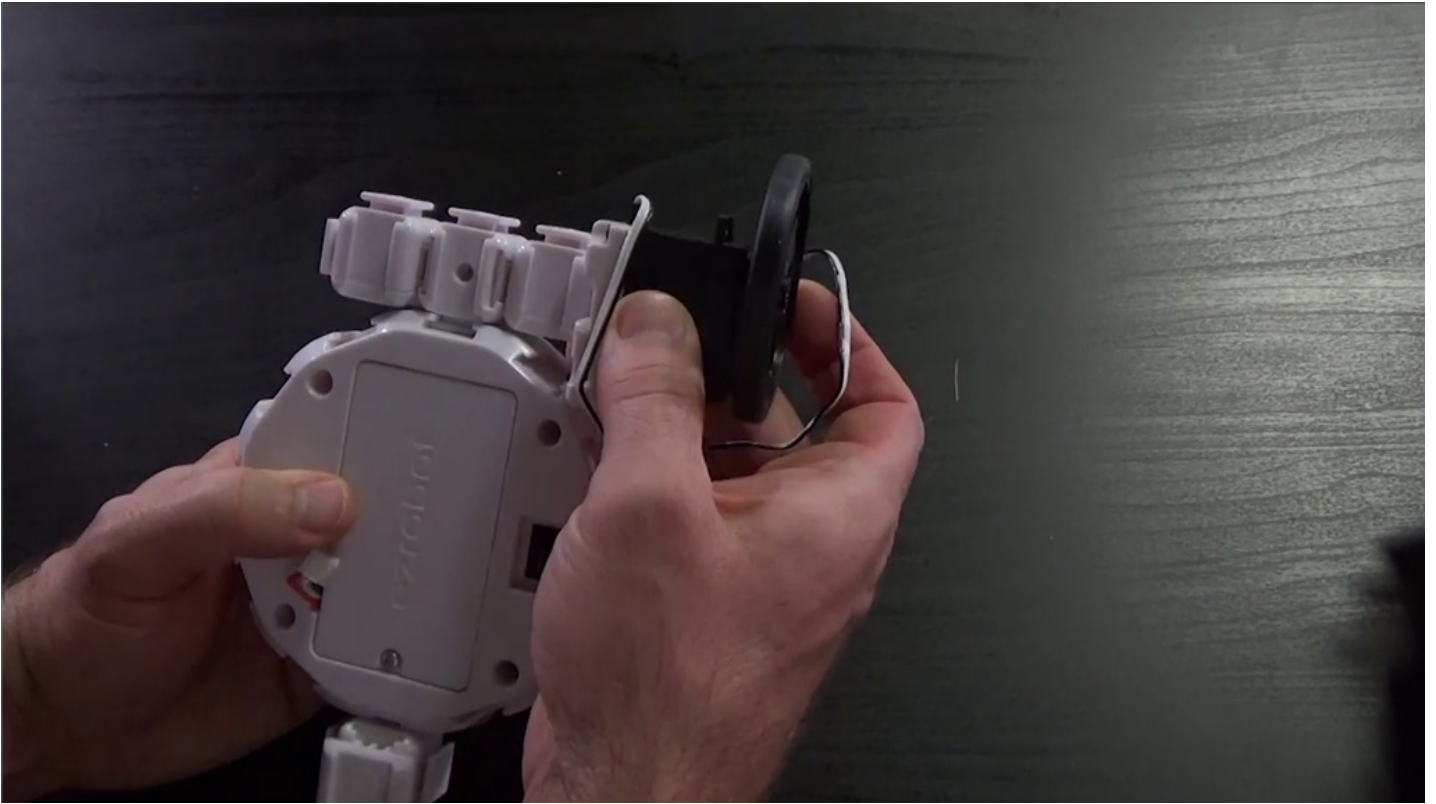
Step 13

Clip another **Play** another **Extension Cube** to each side.



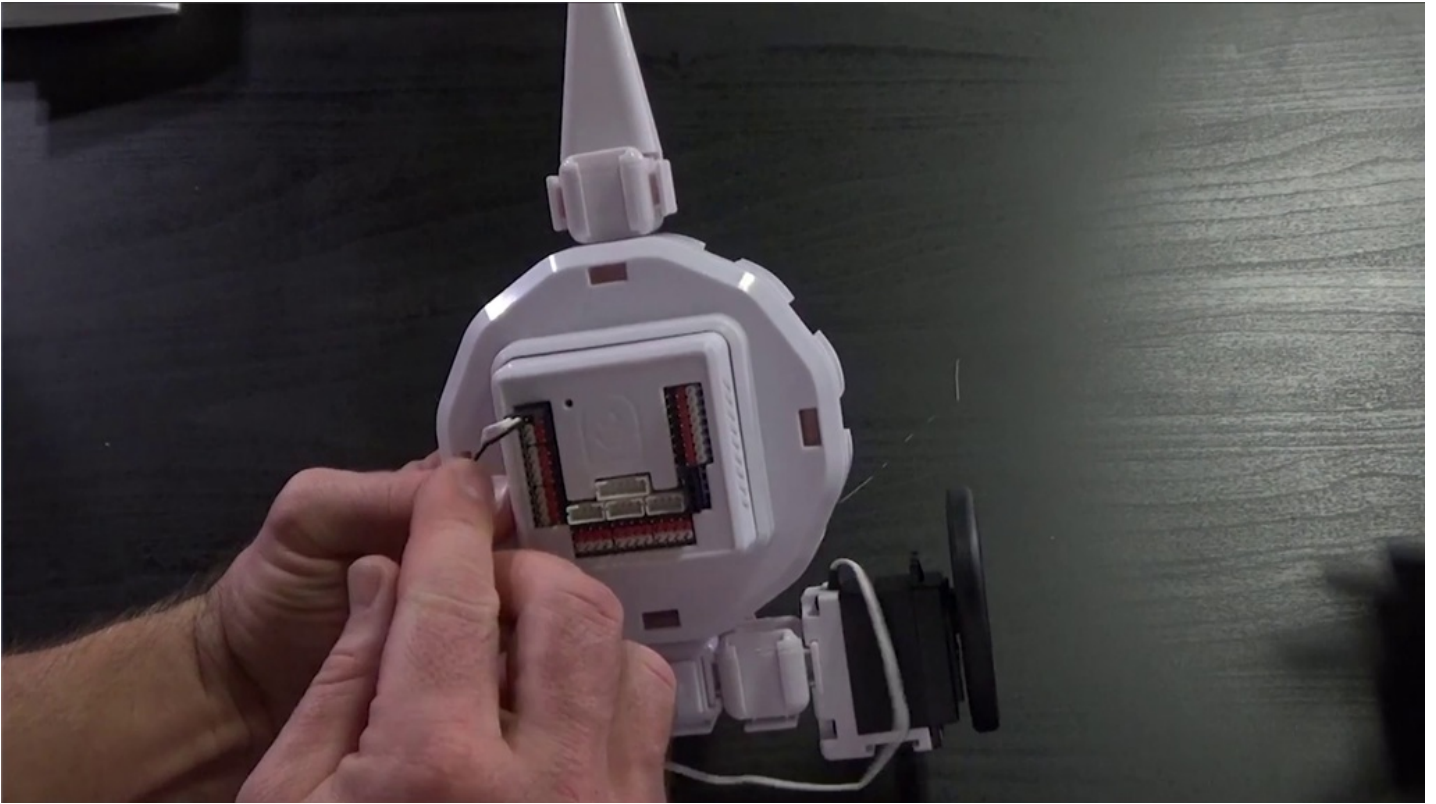
Step 14

Clip a **Continuous Rotation Servo** to the left **Extension Cube** with the white bracket toward the inside.



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.



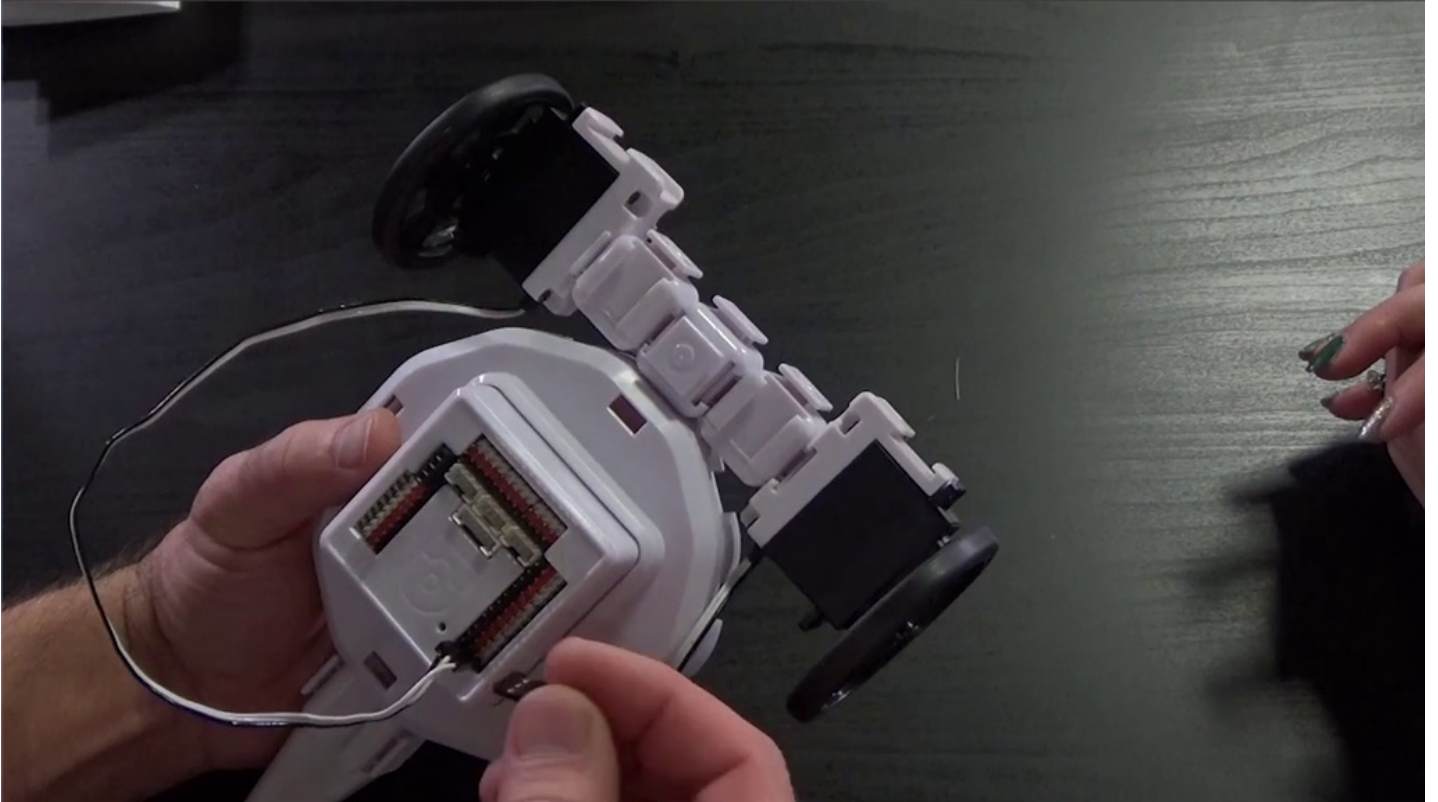
Step 17

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.



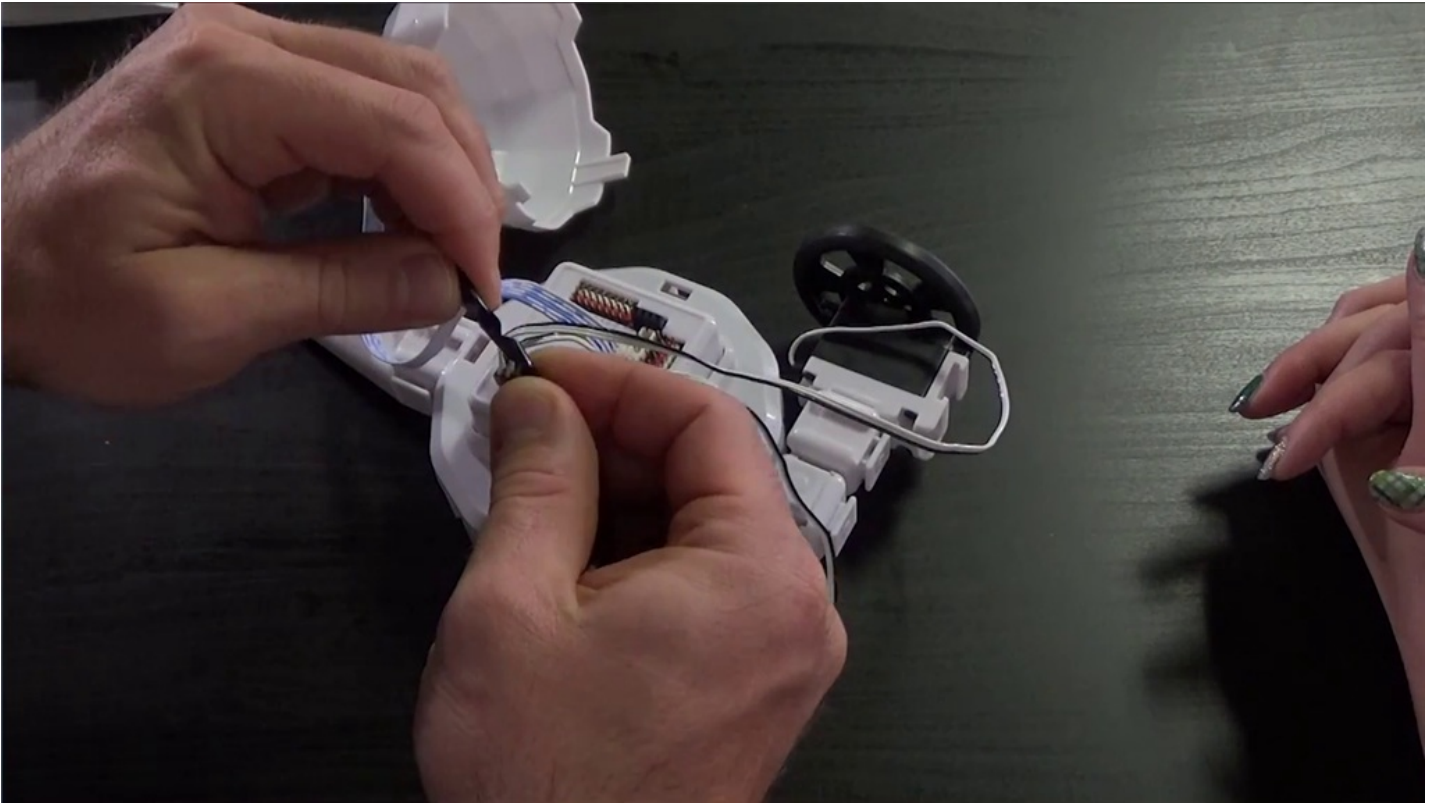
Step 21

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



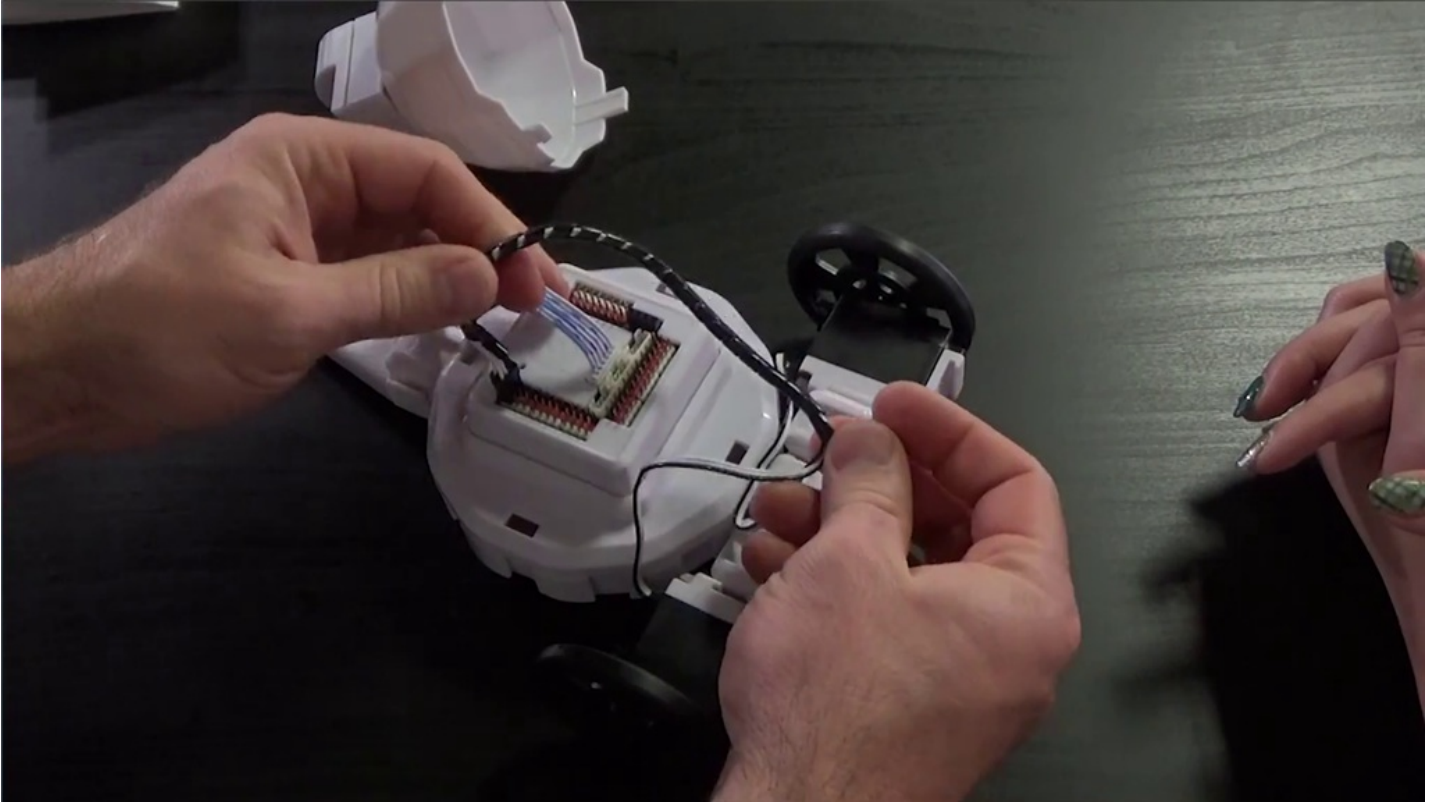
Step 22

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.

Build My EZ-Robot

Introduction Assembly Reorder

Step 10 of 10) Add EZ-B v4 Camera

Connect Camera to Camera port

Purchase all 10 Community Print these

- Dodocagon Body**
Begin your robot build with this versatile dodocagon dome shell as the main body. 13
- Extension Cube**
The extension cube allows multiple EZ-Bits to be connected to a single location.
- Hexapod Foot**
The Hexapod Foot attaches to a female Clip'n'Play connector of a servo. Use this foot on
- Extension Cube**
The extension cube allows multiple EZ-Bits to be connected to a single location.
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- Continuous Rotation Servo**
A continuous rotation servo will rotate 360 degrees, rather than the 180 degrees of a

Views

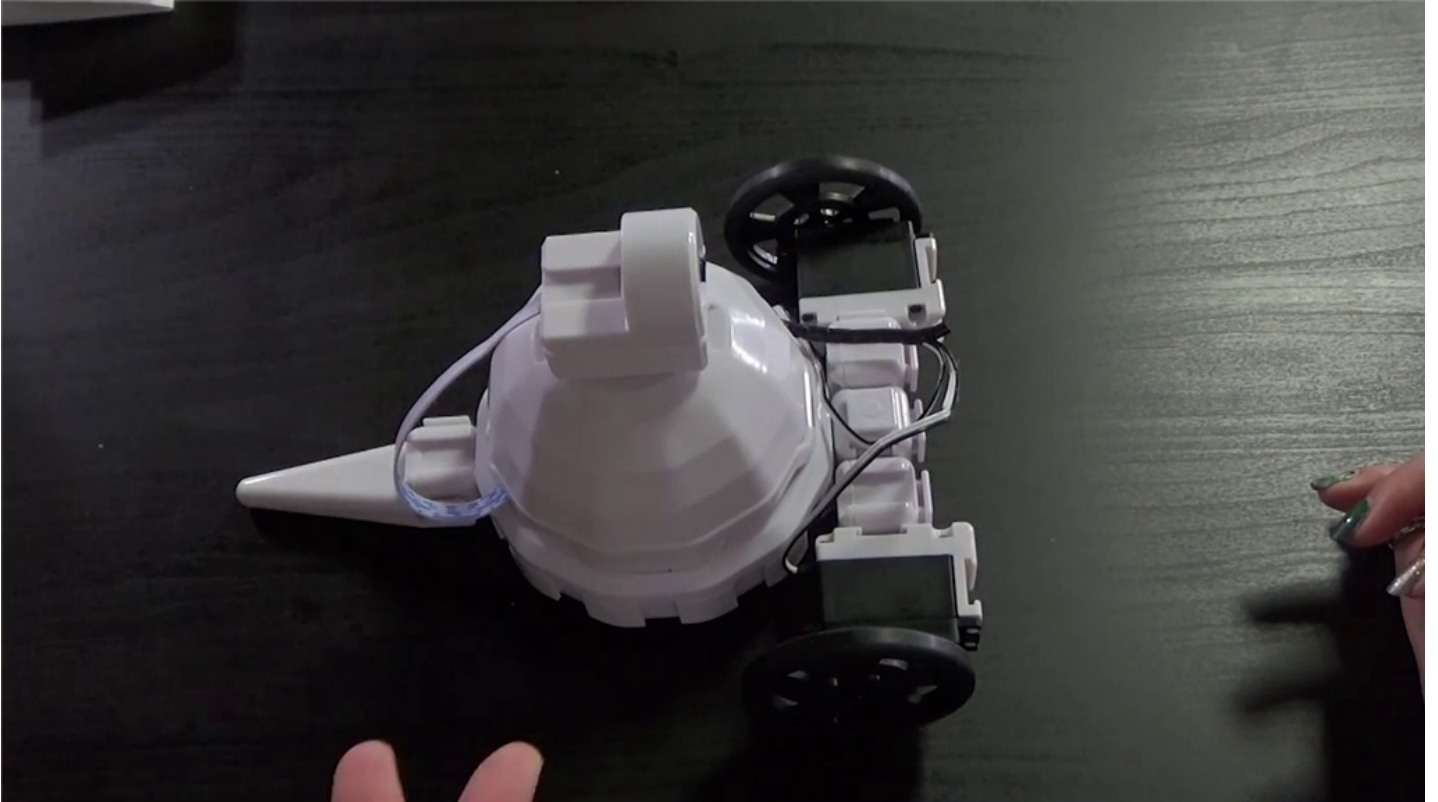
Top
Front
Rear
Left
Right
Bottom

Zoom Out Zoom In

3:51 PM 3/16/2017

Step 25

Your **Revolution AdventureBot** is now complete!



Quiz

Question #1 AdventureBot™'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.