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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

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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.

Step 5

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

Step 6

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

Step 7

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

Step 8

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

Step 9

Clip’n’Play a **Lever Servo** into the “1 o’clock position”.

Step 10

Connect the servo to **D0**.

Step 11

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 12

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

Step 13

Connect the servo to **D1**.

Step 14

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

Step 15

Clip’n’Play a **Lever Servo** into the “11 o’clock position”.

Step 16

Connect the servo to **D3**.

Step 17

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

Step 18

Connect the servo to **D4**.

Step 19

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

Step 20

Clip’n’Play a **Lever Servo** into the “9 o’clock position”.

Step 21

Connect the servo to **D6**.

Step 22

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

Step 23

Connect the servo to **D7**.

Step 24

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

Step 25

Clip’n’Play a **Lever Servo** into the “7 o’clock position”.

Step 26

Connect the servo to **D9**.

Step 27

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

Step 28

Connect the servo to **D10**.

Step 29

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

Step 30

Clip’n’Play a **Lever Servo** into the “5 o’clock position”.

Step 31

Connect the servo to **D12**.

Step 32

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

Step 33

Connect the servo to **D13**.

Step 34

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

Step 35

Clip’n’Play a **Lever Servo** into the “3 o’clock position”.

Step 36

Connect the servo to **D15**.

Step 37

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

Step 38

Connect the servo to **D16**.

Step 39

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

Step 40

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.

Step 41

Check that connections are still secure and test for full motion.

Step 42

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

Step 43

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

Step 44

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

Step 45

Use the 3D view buttons to check all angles.

Step 46

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.