

**HEBI**  
ROBOTICS

## Out of the Box with Daisy

The HEBI Hexapod



1. Start by opening the box and removing the top layer of foam. There is a bag of cables on the top - set these aside (they are spares).
2. Remove the 4 batteries in the center slots. Remove the two chargers at the bottom left and right.
3. Remove the plastic bag in the slot at the bottom. This bag contains springs and antennas.



4. Before proceeding it is a good idea to charge up at least two of the batteries. When the batteries are shipped, they are in a deep sleep mode. To turn them on, tap the button. After a few seconds the LEDs on the front will glow green. Plug one battery into each charger. The batteries can be chained together and charged all at once, however the fewer batteries per charger the faster they will charge.

For more information on the batteries, see the manufacturer website:

<https://www.ebikes.ca/shop/electric-bicycle-parts/batteries/b362-7-ligo.html>

The batteries have a lot of features and the video at the bottom of the webpage above is an excellent resource.

5. Start carefully removing layers of foam. There are two layers that are intertwined with the hexapod legs.
6. Once you are through the top two layers, find a helper to help you lift the hexapod out. It can be fairly awkward and floppy so be careful.
7. Lay the hexapod out on the floor with all of the legs extended. Make sure that the white plastic panels on the shoulder actuators are pointed towards the center of the robot as shown in the photo below.



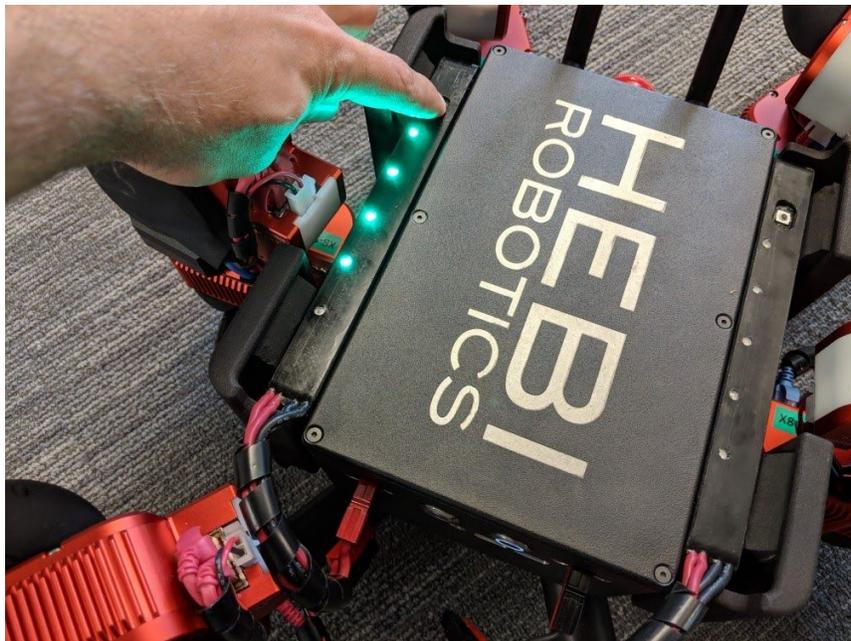
8. The gas support springs must now be attached to the hexapod legs. Note that the ball sockets on the springs have retaining clips that must be removed before you can attach them. Once they are snapped into place, put the retaining clips back in.



9. Attach the two provided antennas to the antenna jacks on the back of the chassis.



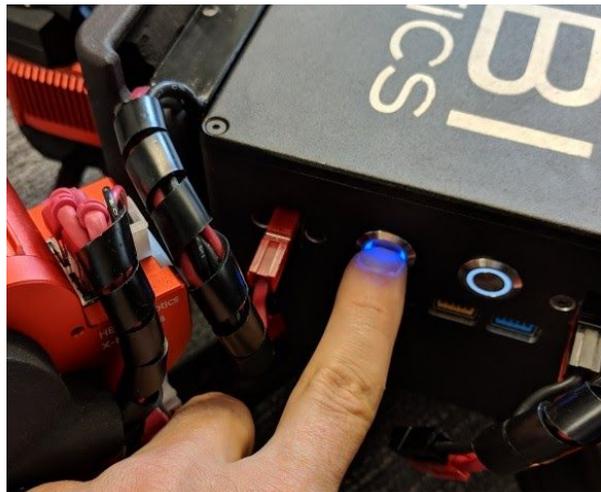
10. Insert two of the batteries as shown below. The batteries plug into the front of the robot chassis. Each battery has two plugs and only one needs to be attached to the robot. You can use one of the extra plugs to attach a charger to keep the batteries topped up while the robot is running. Do not attach both chargers while the batteries are in the robot! The wiring in the chassis attaches the two batteries together and the chargers will not work correctly together.



11. If the batteries are not already on, press the button until the green light comes on.

12. You will hear a beep from the internal router. After a few seconds you will hear two short beeps. This means that the router has fully booted up.

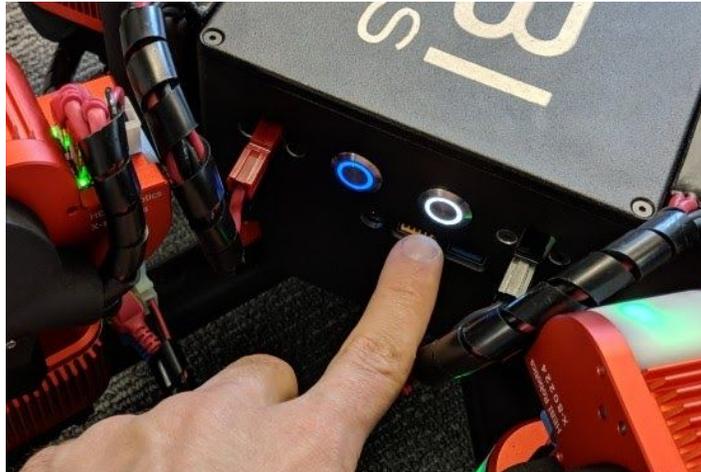
13. Hold down the left button until it turns blue. This will turn on the actuators.



14. Make sure the M-Stop switch on the back is reset. To do this, twist it clockwise and it will pop out. You can use this switch to stop the robot motion at any time by pushing it in. By default all of the joints will hold their current position when this is triggered and all of the actuator status lights will blink yellow.



15. Tap the right button to turn on the computer. It will light up.



16. The computer will boot up and automatically load the hexapod demo application. The status lights on the actuators should turn blue.

17. Open the HEBI Mobile I/O app on your phone or tablet. For android, the default settings for the app will work. For iOS, go into the app settings and make sure that the name is set to “mobileIO” and the Family is set to “Daisy”.

18. Connect your mobile device to the robot wifi network. The password is hebi1234

19. Open the HEBI Mobile I/O app. The robot should start to move and stand up. The robot can now be controlled using the joystick on the screen. If anything goes wrong, you can hit the red button on the back of the robot.

20. To turn off the system, tap the computer power button. This will trigger a shutdown. You can now unplug and turn off the batteries.

**Note:**

To access the onboard computer, you can either connect and HDMI monitor and USB cable or use VNC to connect remotely. If you connect to the robot network, the onboard computer has the IP address 10.10.1.2. The username is “hebi” and the password is “hebi1234”. The computer is set to launch the demo code on boot - this can be changed in the startup items in ubuntu.