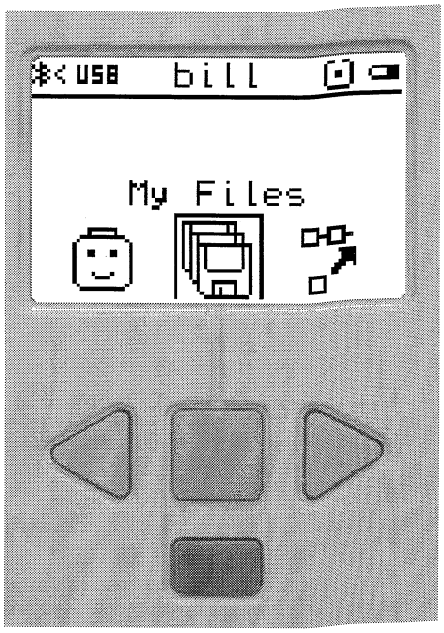
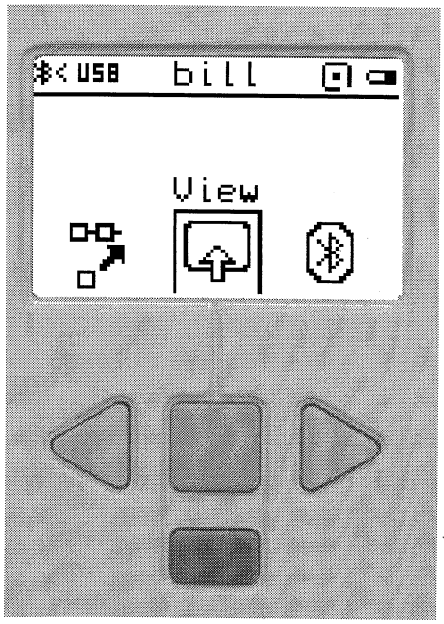
Ultrasonic Sensor *Readings*

This is how you test a ultrasonic sensor inside the view section.

1. Start with the level that says My Files.



2. Scroll to the right by pushing the right gray button until you see View. Push the center orange button.



This will open up the view section so you can check the various sensors as well as the rotations of the motors.

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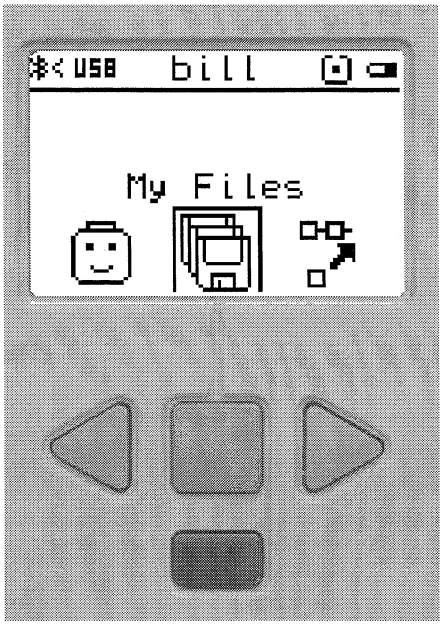
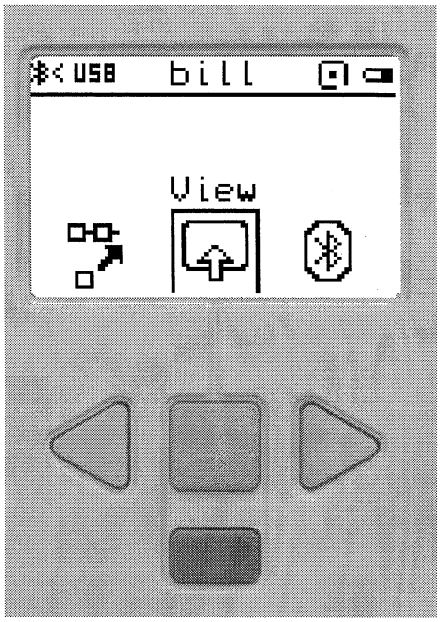
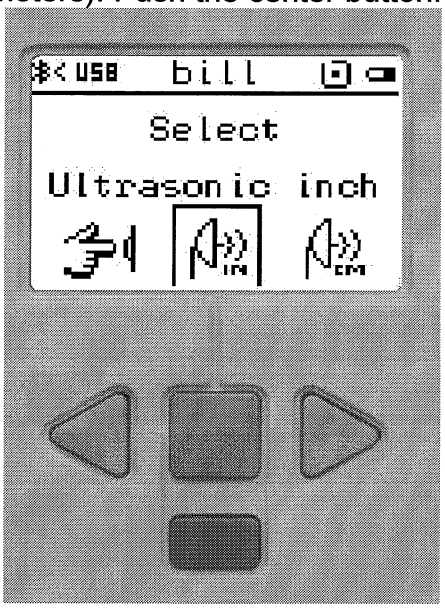


2. Scroll to the right by pushing the right gray button until you see View. Push the center orange button.

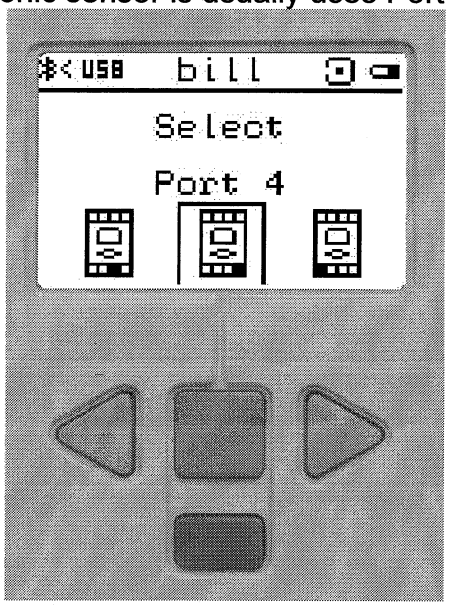


This will open up the view section so you can check the various sensors as well as the rotations of the motors.

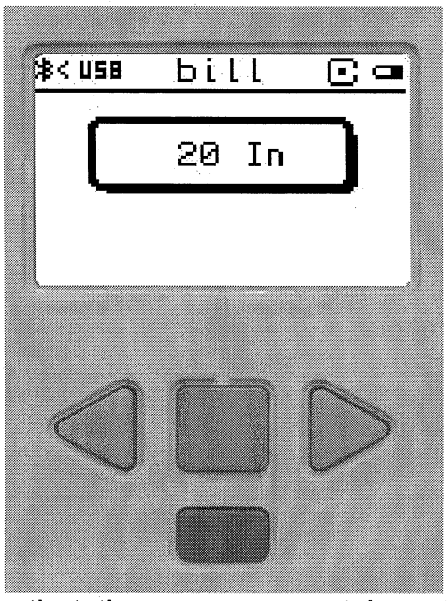
1. Push the right, gray button until you get to Ultrasonic inch (or Ultrasonic cm for centimeters). Push the center button.



2. Scroll sideways using the right gray button to get to the port you want. The ultrasonic sensor is usually uses Port 4.

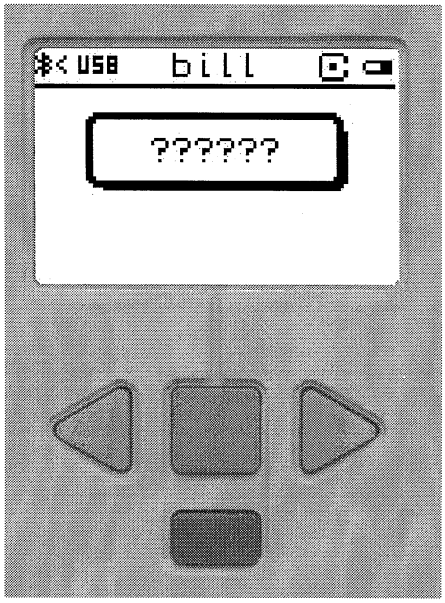


3. You can point the ultrasonic sensor at various objects and see what the sensor says the distance is.



Notice that the measurement is not very accurate. It will vary depending on the surface and it will not give a reading on a distance less than 3 inches (7 cm) in most cases.

4. If the sensor is not working or is not hooked up right, it will give you a series of question marks.



Check to see if the sensor is plugged into the same port as the one you are checking. Also, check to see the cord is plugged all the way into the brick and into the sensor.

Ultrasonic Sensor Readings

Mission:
The student will use the robot to test various objects to see how the ultrasonic sensor responds to various object depending on the angle, shape, and hardness of the object.

Equipment: ultrasonic sensor

Directions:

1. Attach the ultrasonic sensor so that it faces out away from the robot.
2. Set the robot so that the screen shows the ultrasonic sensor in inches or centimeters and set it one foot away from the first object.
3. Write down the reading of the first object in on your hand out. Move on to the next object and get a reading for that. Continue to do the same for each object.

	Situation	Reading in inches or centimeters
1	wood straight	
2	wood 45 degree	
3	2 liter pop bottle	
4	towel on wood	

Explain why the readings were different in your opinion. How would the various surfaces make a difference to the readings.		
1	wood straight	
2	wood 45 degree angle	
3	2 liter pop bottle	
4	towel on wood	

Turn this in to the teacher.