**For each table, do the following functionality tests:**

1. Make sure the Pasco Interface and Computer connection via USB is physically well established.

1. The motion sensors rotate and are able to stay stable while facing any direction.
2. Open each file (viz. “1-D motion.ds”, “Bouncing ball.ds” and “1-D motion\_relative.ds”) with the right number of sensors connected (2 sensors connected for “1-D motion\_relative.ds” and 1 for the rest). Press start in data studio. The motion sensors should start making a clicking sound.
3. Open “1-D motion.ds”. Mount the sensor at the midway point on the sensor stand. Now position the sensor such that it faces the farthest wall in the room (about 8m away) and press start. The green LED should not blink. Stand on one side of the motion sensor (left or right) at a small distance and at least 15cm ahead of the sensor.
**(a)** Switch the sensor to wide beam. Test whether the sensor detects echoes if you’re hand is sufficiently close to the circumference of the sensor (i.e. the green LED should blink).
**(b)**Now switch to narrow beam. The LED should not blink if you hold your hand at the same position as you did above but it should blink if you place your hand right in front of the motion sensor.
4. Place the cart with the vane attached to one end at a certain known distance from the motion sensor and check whether data studio reads the cart to be at the same distance.
5. Make sure the table clamps, rods, right-angle clamp and the ramp, all fit tightly and can be adjusted.

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| **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |

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**(a)**

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**(b)**

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**For each table check the presence of:**

1. 1 Pasco computer interface.
2. 1 Pasco scientific ramp.
3. 1 Pasco collision cart and steel vane.
4. 2 steel rods.
5. 2 table clamps, 1 right angle clamp
6. 1 Cenco sensor stand.
7. 2 Pasco motion sensors with connecting cables.

**In the lab, check the presence of:**

Eight 100-cm rulers.

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