

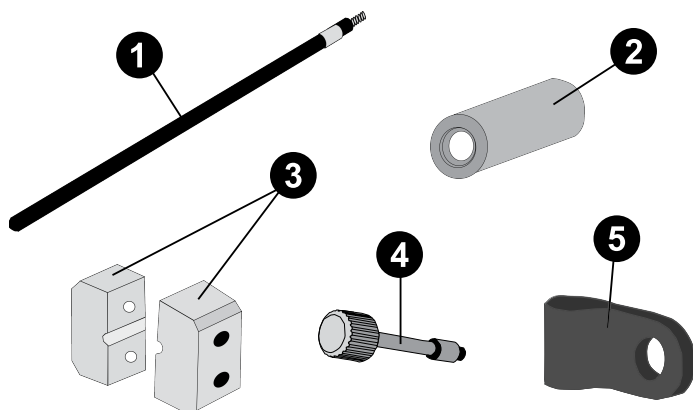
Centripetal Force Pendulum (ME-9821)

Introduction

The Centripetal Force Pendulum is designed to attach to a PASCO Wireless or PASPORT force sensor and rotary motion sensor. The centripetal force is measured directly with the force sensor and is related to the velocity measured with the rotary motion sensor.

Components

Included equipment:



① Light-weight pendulum rod

② Adapter rod

Use to attach the force sensor to the rotary motion sensor.

③ Clamp-on mass (2 pieces), 100 g

④ Mounting screw, brass

⑤ Cord holder clip

If using a PASPORT Force Sensor (PS-2104), use this to hold the cable in place during the experiment.

Additional equipment required for experiments:

- Force sensor, such as the Wireless Force Acceleration Sensor (PS-3202) or PASPORT Force Sensor (PS-2104)
- Rotary motion sensor, such as the Wireless Rotary Motion Sensor (PS-3220) or PASPORT Rotary Motion Sensor (PS-2120A)
- Large Table Clamp (ME-9472) or equivalent clamp or rod base
- Metal rod, such as the Stainless Steel Rod, 45 cm (ME-8736)

Equipment setup

1. Slide the adapter rod into the front center hole on the force sensor. Make sure the side of the adapter rod with the smaller opening is visible from the front of the sensor.
2. Tighten the force sensor thumbscrew onto the adapter rod to secure it in place.
3. Slide the force sensor with adapter rod onto the rotary motion sensor shaft, as shown in Figure 1. If using the Wireless Rotary Motion Sensor (PS-3220), you will need to remove the three-step pulley from the shaft.

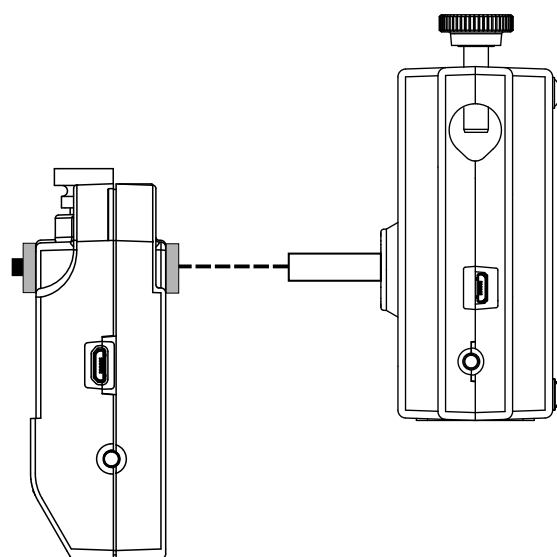
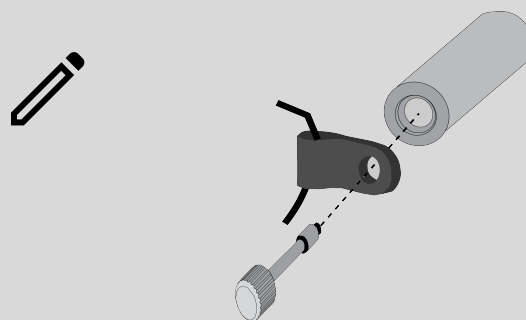


Figure 1. Connecting the Wireless Force Sensor (PS-3202) to the Wireless Rotary Motion Sensor (PS-3220) via the adapter rod.

4. Insert the brass thumbscrew into the adapter rod. Tighten the thumbscrew to secure the two sensors together.

NOTE: If using the PASPORT Force Sensor (PS-2104), slip the cord holder clip onto the sensor's cord and pass the thumbscrew through the holes in the clip when connecting to the adapter rod, as shown below.



5. Remove any attachment or bumper from the socket on the bottom of the force sensor. Screw the light-weight pendulum rod into the socket.
6. Insert the end of the pendulum rod into the groove in the center of the split clamp-on mass, holding the two halves together. Tighten the thumbscrews to secure the mass halves in place on the end of the rod.
7. Use a Large Table Clamp (ME-9472) and metal rod to mount the rotary motion sensor securely to the edge of the table, as shown in Figure 2.



TIP: If a Large Table Clamp is not available, you can also mount the apparatus to a rod base.

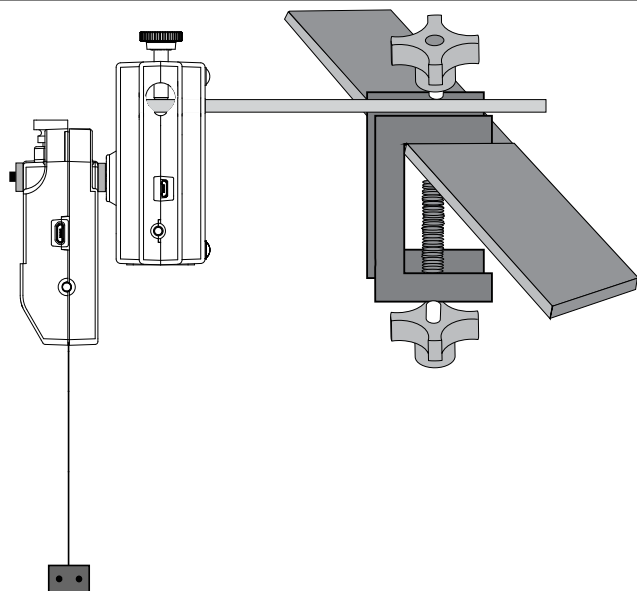


Figure 2. Mounting the connected sensors to a table.

Specifications and accessories

Visit the product page at [pasco.com/product/ME-9821](https://www.pasco.com/product/ME-9821) to view the specifications and explore accessories. You can also download support documents from the product page.

Technical support

Need more help? Our knowledgeable and friendly Technical Support staff is ready to answer your questions or walk you through any issues.

- Chat [pasco.com](https://www.pasco.com)
- Phone 1-800-772-8700 x1004 (USA)
+1 916 462 8384 (outside USA)
- Email support@pasco.com

Regulatory information

Limited warranty

For a description of the product warranty, see the Warranty and Returns page at www.pasco.com/legal.

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