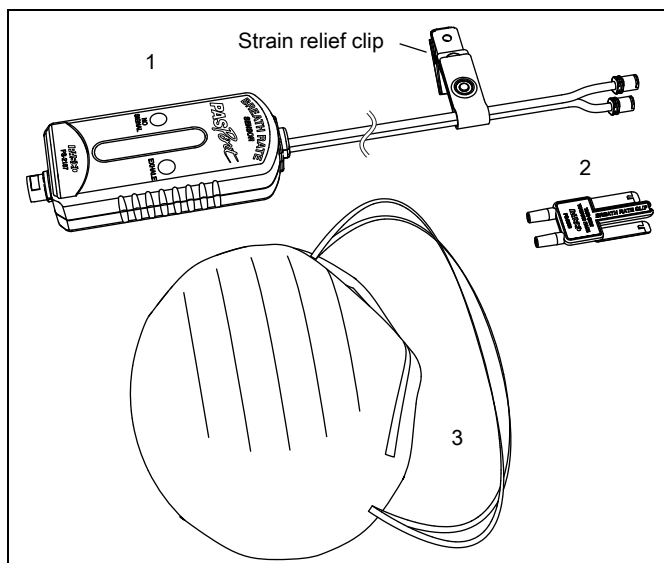


Breath Rate Sensor

PS-2187

For Educational Use Only! Note: This is not a medical device. It is designed for educational use only and should not be used in any medical process such as life support or patient diagnosis. It is also not intended for use in graduate research or industry including industrial control or any type of industrial testing.



Included Parts

1. Breath Rate Sensor
2. Disposable Clips, 10 pieces
3. Disposable Masks, 10 pieces

Additional Part Required

- PASCO interface
- PASCO Data Collection Software

Replacement Parts

- Disposable Clips, package of 10, PS-2568
- Disposable Masks, package of 5, PS-2567

Quick Start

1. Connect the Breath Rate Sensor to your PASCO interface.
2. Connect the interface to your computing device and start the PASCO Data Collection Software.

3. Connect a *new, unused* clip to the sensor's tubes.
4. Attach the clip to a *new, unused* mask
5. Place the mask on your face.
6. Press or click the start button to begin recording data.

Introduction

The Breath Rate Sensor measures breathing rate before, during, and after exercise. This measurement is sent digitally to a computer or datalogger where it is displayed and recorded for analysis. The sensor detects each breath by monitoring the air pressure in a mask worn by the subject.

Safety

- *Each mask and each clip is to be used by one person only.* Dispose of clips and masks after use.
- The sensor is for educational use only.

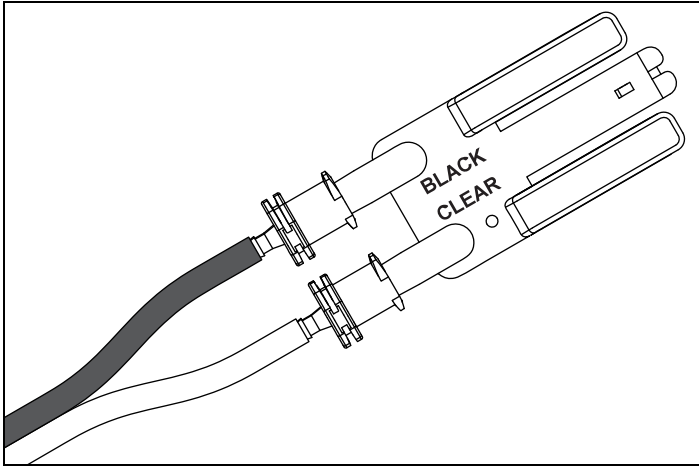
Set-up

Connecting the Sensor to an Interface

1. Connect the sensor's plug to any port of a PASCO interface.
2. Connect the interface to a computing device (such as a computer, tablet, or smart phone) and start the PASCO Data Collection Software.

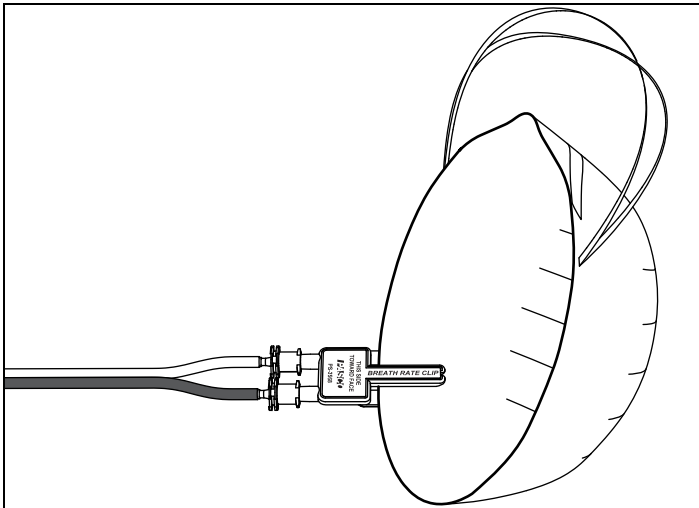
Connecting a Clip to the Sensor

Plug the two ports of the clip into the tubes of the sensor. Observe the BLACK and CLEAR labels on the clip and ensure that each port is connected to the correct tube.



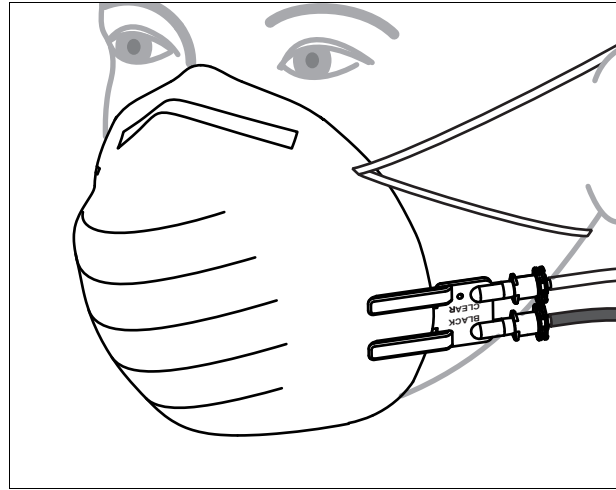
Attaching the Clip to a Mask.

Slide the clip onto the side of the mask as illustrated. Observe the THIS SIDE TOWARD FACE label.



Placing the Mask on Your Face

1. Place the mask over your mouth and nose with the straps around your head as illustrated.
2. Ensure that the mask fits closely to your face.
3. Attach the metal strain-relief clip to your clothes or the mask itself to prevent the tubes from pulling the breath rate clip.



Collecting Data

See the Online Help for the PASCO Data Collection Software for details about collecting and analyzing data.

1. While breathing normally, observe the indicator lights on the sensor. The green EXHALE indicator illuminates when the sensor detects a breath. If the red NO SIGNAL indicator is illuminated, adjust the fit of the mask.
2. Click Record or press Start in the Data Collection Software to begin recording data.
3. Click or press Stop to stop recording data.

About the Measurements

The sensor determines breath rate by measuring the time between exhalations. It outputs two measurements: Breath Rate and Breath Rate Average.

- **Breath Rate** is the inverse of the time between consecutive exhalations.
- **Breath Rate Average** is based on the duration of the four previous exhale-inhale cycles.

Both measurements are updated every time you exhale.

Specifications

Measurement Range	5 breaths/minute to 60 breaths/minute, typical
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Technical Support

For assistance with any PASCO product, contact PASCO at:

Address: PASCO scientific
10101 Foothills Blvd.
Roseville, CA 95747-7100

Phone: +1 916 462 8384 (worldwide)
800-772-8700 (U.S.)

Web: www.pasco.com

Email: support@pasco.com

For more information about the Breath Rate Sensor and the latest revision of this Instruction Sheet, visit the PASCO Web site at www.pasco.com

Limited Warranty

For a description of the product warranty, see the PASCO catalog.

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Product End of Life Disposal Instructions:

This electronic product is subject to disposal and recycling regulations that vary by country and region. It is your responsibility to recycle your electronic equipment per your local environmental laws and regulations to ensure that it will be recycled in a manner that protects human health and the environment. To find out where you can drop off your waste equipment for recycling, please contact your local waste recycle/disposal service, or the place where you purchased the product.

The European Union WEEE (Waste Electronic and Electrical Equipment) symbol (to the right) and on the product or its packaging indicates that this product **must not** be disposed of in a standard waste container.

