

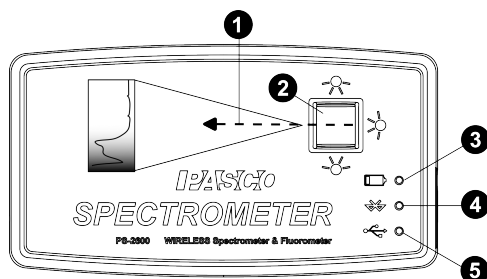
Wireless Spectrometer (PS-2600A)

Introduction

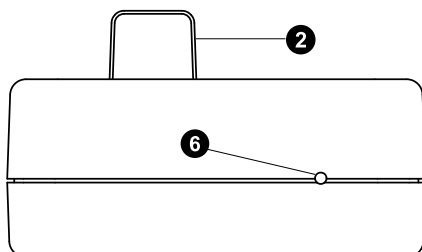
The Wireless Spectrometer is specifically designed for introductory spectroscopy experiments. The Bluetooth and USB connectivity enables its use with tablets and computers. With this one apparatus, you can measure intensity, absorbance, transmittance, and fluorescence, making this a powerful and intuitive tool for your spectroscopy needs.

Features

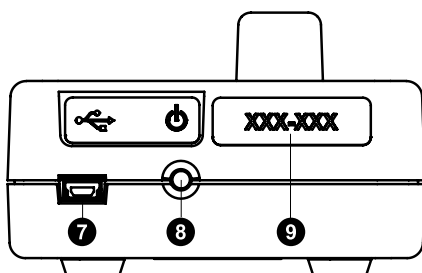
Top view:



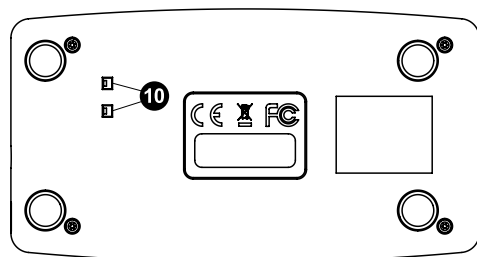
Left view:



Right view:



Bottom view:



1 Light path

The path that light takes to reach the cuvette.

2 Cuvette holder

Used to secure the cuvette containing the sample in place.

3 Battery Status LED

Indicates the status of the Wireless Spectrometer's battery.

Battery LED	Status
Red ON	Low power
Red blink	Charging
Green ON	Fully charged

4 Bluetooth Status LED

Blinks blue to indicate that the device is ready to connect. Lights up blue when connected to Spectrometry via Bluetooth.

5 USB Status LED

Lights up green to indicate that the device is connected to Spectrometry via USB cable.

6 Reset button access

Insert a pin into this port to perform a full reset of the sensor.

7 USB port

Use to connect the device to a USB port or powered USB hub on a computer via the included USB cable.

8 ON/OFF button

Press to turn the device on. Press and briefly hold to turn the device off.

9 Device ID number

Use this to identify the device when connecting to Spectrometry via Bluetooth.

10 Drain ports

Allow the sample to drain out of the device if a spill occurs during an experiment.

Equipment and requirements

Included equipment:

- Wireless Spectrometer (PS-2600A)
- Cuvette and lid (10 each)
- USB cable

Recommended equipment:

- Fiber Optic Probe (PS-2601)

Required software: Spectrometry



Software for Computer or Tablet

Available free for Mac and PC computers and iPad and Android* tablets at the PASCO website:

www.pasco.com/downloads/spectrometry.

Download the software from the PASCO website (Mac and PC), or from the iOS or Android app store or Google Play.

*Android tablet must be Bluetooth-compatible.

Initial step: Charge the battery

The Wireless Spectrometer is partially charged at the factory. The battery is charged by connecting the sensor to a USB port or USB charger via the included USB cable. Leave the Spectrometer off while charging. The charger circuit inside the unit turns itself off when the unit is fully charged, so it can't be overcharged. If the unit has been significantly discharged (such as over a long break), it may require an hour of charging before the red light turns on to indicate charging.

Connecting the Wireless Spectrometer to a tablet or computer via Bluetooth

1. Turn on the Wireless Spectrometer. All three status LEDs should blink in sequence as the device powers on.
2. Start the Spectrometry software and select **Choose Wireless Interface** when prompted.
3. In the **Select Wireless Interface** menu, select the Wireless Spectrometer with a device ID number that matches the number printed on the side of your device.

Connecting the Wireless Spectrometer to a computer with a USB cable

1. Turn on the Wireless Spectrometer. All three status LEDs should blink in sequence as the device powers on.
2. Connect the small end of the included USB cable into the USB port on the back of the Spectrometer.
3. Connect the other end of the USB cable to a USB port or powered USB hub connected to the computer.
4. The USB status LED will shine green to indicate a successful connection. (NOTE: The Bluetooth Status LED will slowly blink blue. The Battery Status LED may also blink to indicate that the battery is charging through the USB cable.)

Usage

Place the sample to be examined in a cuvette. Fill the cuvette to the point where the top of the sample is at least 3.0 centimeters (cm) or 1.2 inches above the bottom. Place the lid on the cuvette, sealing it tightly to prevent leaks, and put the cuvette in the cuvette holder of the Wireless Spectrometer. Set up the experiment in Spectrometry as desired, then begin recording data when ready. (For more information on the use of Spectrometry, see the Spectrometry online help.)



NOTE: The cuvette has two smooth sides and two corrugated sides. When putting the cuvette into the Wireless Spectrometer, the smooth sides need to be along the light path (perpendicular to the light path). The body of the spectrometer is made from ABS. Only use solutions in the spectrometer to which ABS shows good chemical resistance. Avoid letting any solution come in contact with the spectrometer housing.

Maintenance

Cleaning the cuvette holder

Two drain ports in the bottom of the cuvette holder allow for drainage if something spills into the holder. To clean the holder, moisten a small cotton swab with deionized water and gently wipe the interior. The cuvettes included with the spectrometer are made from polystyrene. Only solutions to which polystyrene shows good chemical resistance should be used with these cuvettes.

Replacement parts

You can order Cuvettes and Caps (SE-8739) to receive 100 replacement cuvettes and lids.

The small printed circuit board that holds the incandescent bulb and the three light-emitting diodes can be removed and replaced by a **skilled technician**. Contact Technical Support regarding availability and installation instructions.

Battery replacement

If the red charging light does not turn on after more than an hour of charging, the battery may need to be replaced. The battery is field replaceable using a Rechargeable LiPoly Replacement Battery (PS-2569). Removing the battery requires a Torx T8 screwdriver and a small Phillips head screwdriver.



CAUTION: Make the area as dust-free and static-free as possible before opening the Wireless Spectrometer. **Do not** touch the optical components inside the Spectrometer.

1. Use the Torx screwdriver to remove the four screws from the bottom of the Spectrometer case.
2. Lift the top half of the case off the Spectrometer and set it aside.
3. Disconnect the battery leads from the connector on the bottom edge of the printed circuit board.
4. Use a small Phillips head screwdriver to remove the one small screw that is near the middle of the top edge of the printed circuit board.
5. Lift the printed circuit board aside and replace the square shaped battery pack. Reconnect the battery leads to the connector on the bottom edge of the printed circuit board.
6. Check that the printed circuit board and its components are free of dust.
7. Reverse Steps 1 through 4 to close the Spectrometer.


Contact PASCO Technical Support for more information.

Troubleshooting

- If the Wireless Spectrometer loses Bluetooth connection and will not reconnect, try cycling the ON/OFF button. Press and *briefly* hold the button until the status LEDs blink in sequence, then release the ON/OFF button to turn on the Spectrometer.
- If the Spectrometer stops communicating with the computer software or tablet application, try restarting the software or application. If the problem remains, try cycling the ON/OFF button.
- As a last resort, push a pin into the Reset port on the left end of the Spectrometer.

Software help

The Spectrometry Help site provides additional information on how to use this product with the software. You can access the help within the software or online.

Software: Info and Settings  > Help

Online: help.pasco.com/spectrometry

Specifications and accessories

Visit the product page at pasco.com/product/PS-2600A to view the specifications and explore accessories. You can also download experiment files and support documents from the product page.

Experiment files

Download one of several student-ready activities from the PASCO Experiment Library. Experiments include editable student handouts and teacher notes. Visit pasco.com/freelabs/PS-2600A.

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 |
|  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.

Copyright

This document is copyrighted with all rights reserved. Permission is granted to non-profit educational institutions for reproduction of any part of this manual, providing the reproductions are used only in their laboratories and classrooms, and are not sold for profit. Reproduction under any other circumstances, without the written consent of PASCO scientific, is prohibited.

Trademarks

PASCO and PASCO scientific are trademarks or registered trademarks of PASCO scientific, in the United States and in other countries. All other brands, products, or service names are or may be trademarks or service marks of, and are used to identify, products or services of, their respective owners. For more information visit www.pasco.com/legal.

Made for iPad

"Made for iPad" means that an electronic accessory has been designed to connect specifically to iPad and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPad may affect wireless performance.

iPad, iPad Air, and iPad mini are trademarks of Apple, Inc, registered in the U.S. and other countries.

FCC statement

This device complies with part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CE statement

This device has been tested and found to comply with the essential requirements and other relevant provisions of the applicable EU Directives.

Product end-of-life disposal



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 or disposal service, or the place where you purchased the product. The European Union WEEE (Waste Electronic and Electrical Equipment) symbol on the product or its packaging indicates that this product must not be disposed of in a standard waste container.

Battery disposal



Batteries contain chemicals that, if released, may affect the environment and human health. Batteries should be collected separately for recycling and recycled at a local hazardous material disposal location adhering to your country and local government regulations. To find out where you can drop off your waste battery for recycling, please contact your local waste disposal service, or the product representative. The battery used in this product is marked with the European Union symbol for waste batteries to indicate the need for the separate collection and recycling of batteries.