

Geiger-Müller Counter

SN-7927A



Introduction

The SN-7927A Geiger-Müller Counter is a sensor with a Tip-Ring-Sleeve type plug that can be connected to a PASCO Interface. The Geiger-Müller Counter can sense alpha, beta, and gamma radiation when used with PASCO Data Collection Software. (NOTE: If your Interface has only PASPORT input ports, use a Digital Adapter (PS-2159) to connect the sensor to the interface.) Features include the following:

- Versatile positioning options, either hand-held or mounted on a rod stand.
- Audible feedback (the device beeps when it registers a count).

Equipment Included

Item	Number
Geiger-Müller Counter	SN-7927A

Required

Item*
PASCO Interface
PASCO Data Collection Software

(*See the PASCO web site at www.pasco.com for information about PASCO Interfaces and Data Collection Software.)

Recommended

Item*	Number
Radioactive Sources (set of 3)	SN-8110
Sensor Mounting Rod	ME-8965

(*See the PASCO web site at www.pasco.com for information about radioactive sources, rods and bases, and clamps.)

Equipment

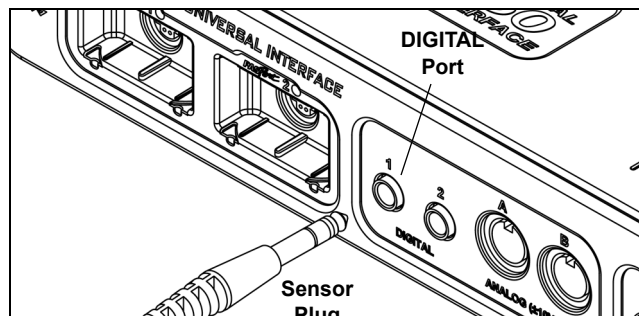
The Geiger-Müller Counter is equipped with a built-in Geiger-Müller tube and integral power supply. The light emitting diode (LED) Power Indicator lights when an operating voltage is supplied to the sensor. The unit has a buzzer that emits an audible signal for each pulse that is recorded. The sensor includes a plastic cap that provides protection for the delicate mica membrane. (The cap has a small venting hole to prevent the creation of a vacuum or high pressure when the cap is removed or replaced.)

CAUTION

The mica window is extremely delicate. **DO NOT** cover the small venting hole of the plastic cap when you are removing or replacing the cap. Leave the cap in place except when alpha radiation is measured. **Never touch the mica window!**

Setup

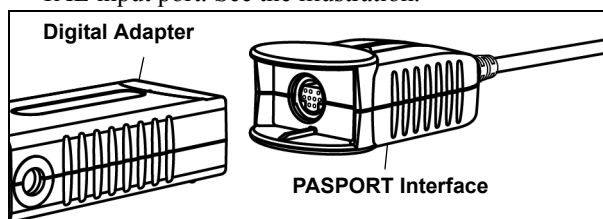
1. Connect the sensor plug to a DIGITAL input port on the PASCO Interface.



2. Connect the interface to a computer and turn on the interface.
3. Start the Data Collection Software. Setup a display.

For information on selecting and configuring the sensor, refer to the Online Help System and User's Guide for the data collection software.

- NOTE: Use a Digital Adapter (PS-2159) to connect the sensor to a PASCO interface that does not have a DIGITAL input port. See the illustration.



- Connect the sensor to port 1 on the Digital Adapter.
- Connect the Digital Adapter to a PASPORT input port on the interface.

NOTE: The Geiger-Müller counter displays the number of counts in a given period of time. To change the period of time, adjust the sampling rate.

Nuclear Safety

Most of the radioactive sources available to educators are very low level isotopes referred to as "license free" sources. However, observe the following guidelines:

- Eating, drinking, and the application of cosmetics in the laboratory are not permitted.
- Pipetting by mouth is never permitted. (Use pipette fillers.)
- Wear gloves and lab coats when working with all liquid radioisotopes.
- Wash your hands thoroughly before leaving the lab.
- Pour radioactive liquid waste into an approved liquid waste container - NEVER into a sink.
- Report all spills, wounds, or other emergencies to the instructor.
- Maintain good housekeeping at all times.
- Store radioactive materials only in the designated storage area, and do not remove sources from the lab.

Specifications

Window material:	Mica
Window diameter:	9.14 millimeters (mm)
Window density:	1.52 milligrams per square centimeter
Count rate (max.):	11,111 per sec (for a minimum dead time of 90 microseconds)

Technical Support

Before calling PASCO Technical Support, please have the apparatus, this user's guide, and the following information available:

- Product name, model number, and serial number.
- Approximate age of the apparatus.
- Detailed description of the problem or sequence of events required to duplicate the problem.

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)
877-373-0300 (U.S.)

Web: www.pasco.com

Email: support@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.

