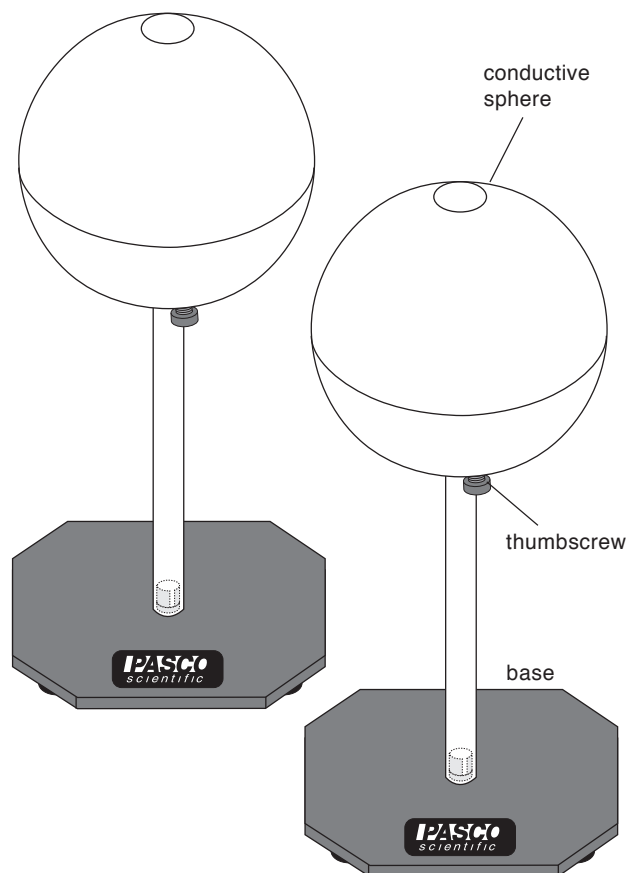


**Instruction Sheet  
for the PASCO  
Model ES-9059B**

## CONDUCTIVE SPHERES, 13cm



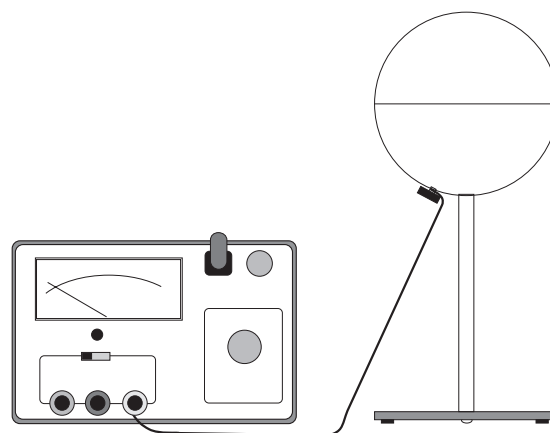
### Introduction

The PASCO ES-9059B Conductive Spheres are convenient objects upon which to store electrical charges. The spheres are 13 cm in diameter and made of nickel-plated ABS plastic. They are mounted on insulating rods that are made of clear polycarbonate (about  $10^{14}$  ohm) and attach to a support base. Each sphere contains a thumbscrew terminal on the lower half of the sphere for attaching a ground cable or a lead from a power supply.

►**Note:** When handling the conductive spheres, take care to keep each sphere and insulating rod free of dirt, grease, and fingerprints to minimize leakage of charge from the spheres.

### Operation with a Power Supply

To use the conductive sphere with the PASCO ES-9049A Power Supply, connect one of the power supply output terminals (+30 V or +100 V) to the thumbscrew terminal on the conductive sphere. If you are using the PASCO ES-9054B Electrometer to measure voltage, connect the electrometer ground terminal (GND) to the black power supply ground terminal. Note that the power supply accessories include two banana plug-to-spade lug insulated wires.



**Conductive Sphere connected to a Power Supply**

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## Using Proof Planes to Sample Charge

The proof planes that are part of the PASCO ES-9057B Charge Producers and Proof Planes can be used to transfer charge from the surface of a conductive sphere. Place the proof plane so that its surface is tangent to the surface of the conductive sphere.

## Cleaning the Spheres

When necessary, clean the sphere and the insulating rod with rubbing (isopropyl) alcohol.



**Warning: Do not use acetone to clean the sphere or insulating rod!**

## Limited Warranty

PASCO scientific warrants the product to be free from defects in materials and workmanship for a period of one year from the date of shipment to the customer. PASCO will repair or replace, at its option, any part of the product which is deemed to be defective in material or workmanship. The warranty does not cover damage to the product caused by abuse or improper use. Determination of whether a product failure is the result of a manufacturing defect or improper use by the customer shall be made solely by PASCO scientific. Responsibility for the return of equipment for warranty repair belongs to the customer. Equipment must be properly packed to prevent damage and shipped postage or freight prepaid. (Damage caused by improper packing of the equipment for return shipment will not be covered by the warranty.) Shipping costs for returning the equipment after repair will be paid by PASCO scientific.

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The exclamation point within an equilateral triangle is intended to alert the user of important operating and safety instructions that will help prevent damage to the equipment or injury to the user.