Modular Circuits for Essential Physics

EM-3536

Included Items

Item	Qty	Item	Qty
Battery Module	2	0.22 farad Capacitor Module	1
Corner Module	4	LED Module	1
Light Bulb Module	3	Motor Module	1
Potentiometer Module	1	10 ohm Resistor Module	1
SPDT Switch Module	1	SPST Switch Module	1
Spring Module	1	Straight Module	5
Tee Module	2	1000 Turn Coil Module	1
33 ohm Resistor Module	1	100 ohm Resistor Module	1
EM-3534 Current Sensor Module	1	PS-3211 Wireless Voltage Sensor	1
1000 ohm Resistor	2	330 ohm Resistor	2
100 microfarad Capacitor	1	330 microfarad Capacitor	1
Diode	1	Battery, AA cell	2
Magnet (0.5 by 0.25 inch)	8	Plotting Compass	1
Jumper Clips	45	Alligator Clip Jumper Wire	1
Storage Case and Lid	1		

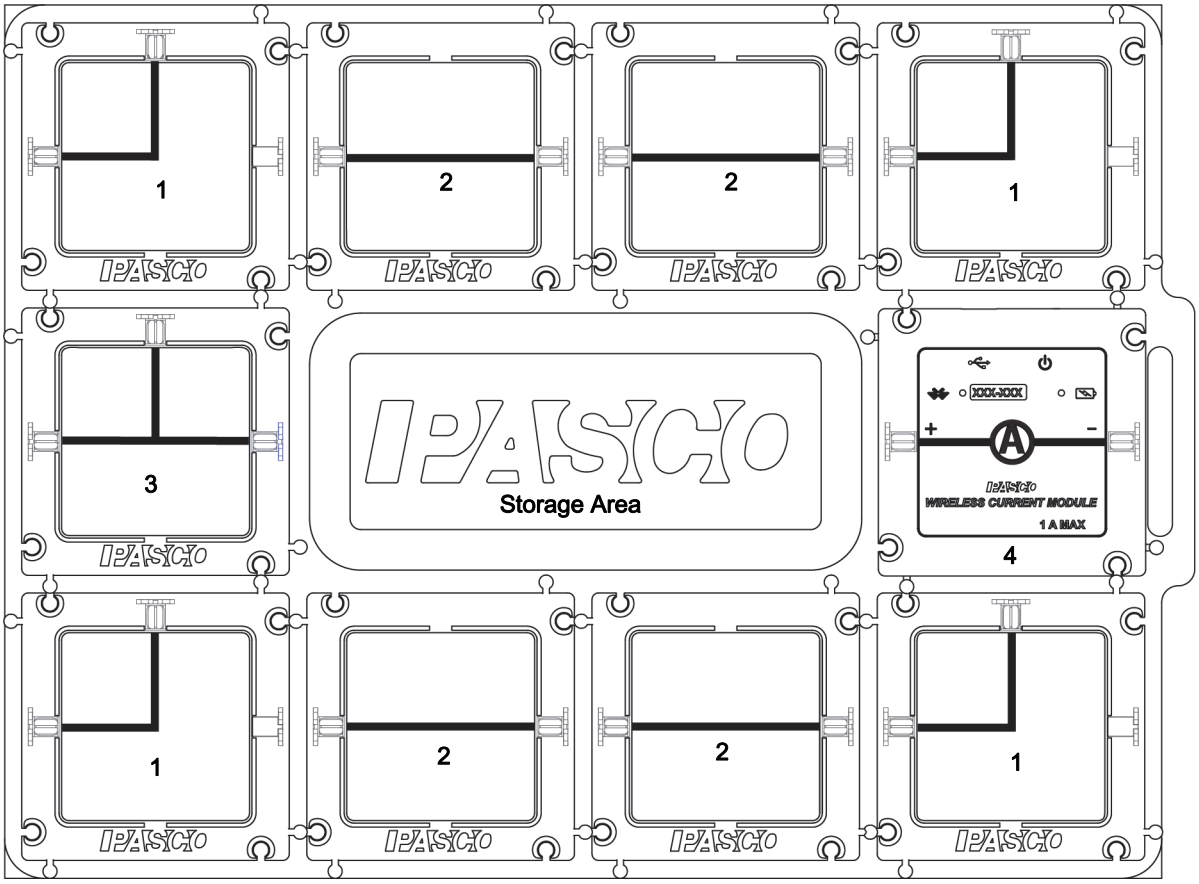
Recommended Items

Shrouded Alligator Test Leads PS-3544, PASCO Software (see www.pasco.com).

Introduction

The PASCO Modular Circuits for Essential Physics kit comes in a Gratnells ™ plastic storage case with three layers. Each layer has a molded plastic piece for storing the components. Modules fit on each layer, and loose components such as the Jumper Clips, Resistors, Capacitors, Magnets, Diode, and Compass fit in trays in the middle of each layer. The plastic layers are attached to specially designed pieces of foam that include cutout areas to fit over the taller modules. Taller modules are stored on the middle and bottom layers. This instruction manual shows how to store the modules on each of the layers.

Storage: Top Layer



Item	ID	Item	ID
Corner Module	1	Straight Module	2
Tee Module	3	Current Sensor Module	4

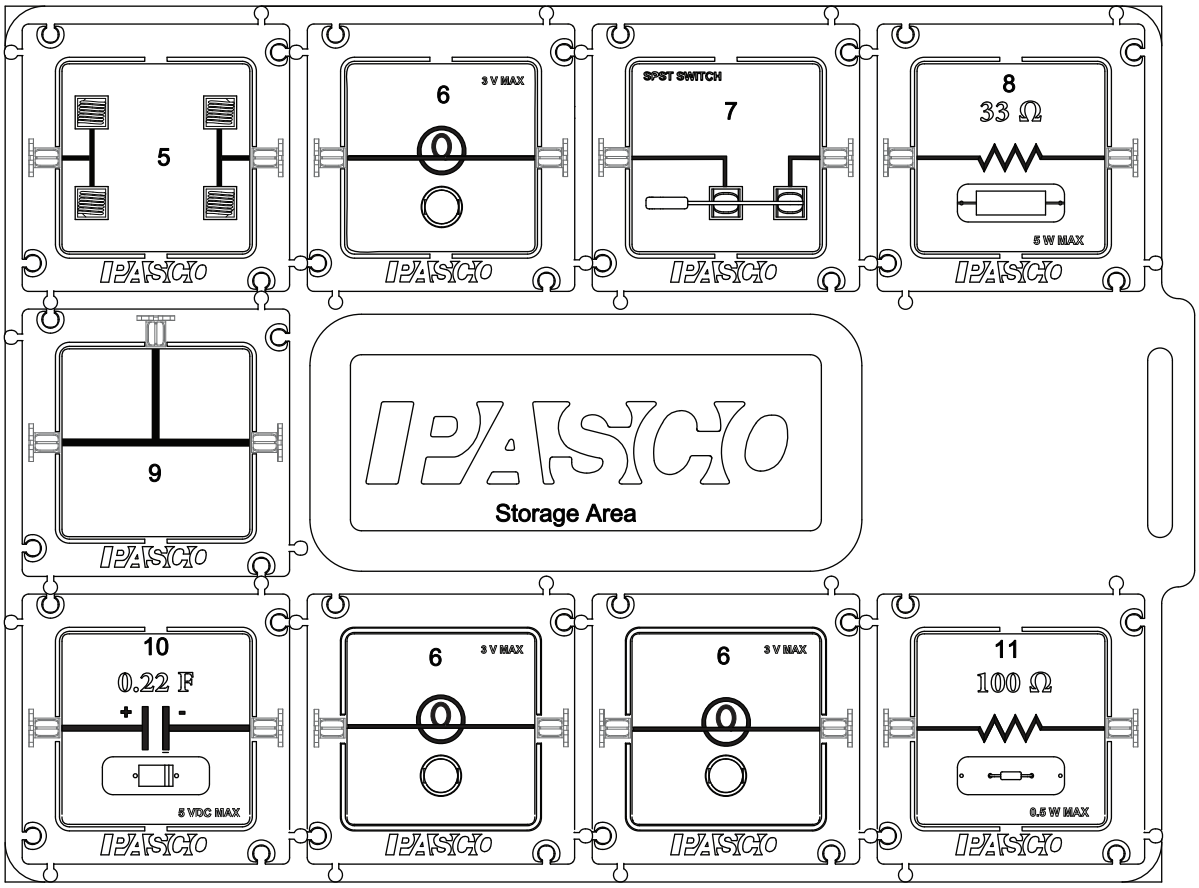
Put modules together by slipping the round pegs on the edges of one module into the round notches on the edge of the next module. Each module has two or three clip holders. Connect modules electrically by pushing a jumper clip down into adjacent clip holders. (See Figure 1 on page 3.)

Experiments

See the **Modular Circuits for Essential Physics** page at the PASCO Web site (www.pasco.com) for information about experiments designed for the EM-3536. The Web page includes a video that is a brief introduction to the Modular Circuits.

Note that the 0.22 farad Capacitor Module is designed for qualitative demonstrations with the Light Bulb Modules and is not the best choice for a resistor-capacitor (RC) circuit experiment. Try the 100 microfarad (μF) or 330 μF capacitors instead.

Storage: Middle Layer (for taller modules)



Item	ID	Item	ID	Item	ID
Spring Module	5	Light Bulb Module	6	SPST Switch Module	7
33 Ω Resistor Module	8	Tee Module	9	0.22 F Capacitor Module	10
100 Ω Resistor Module	11				

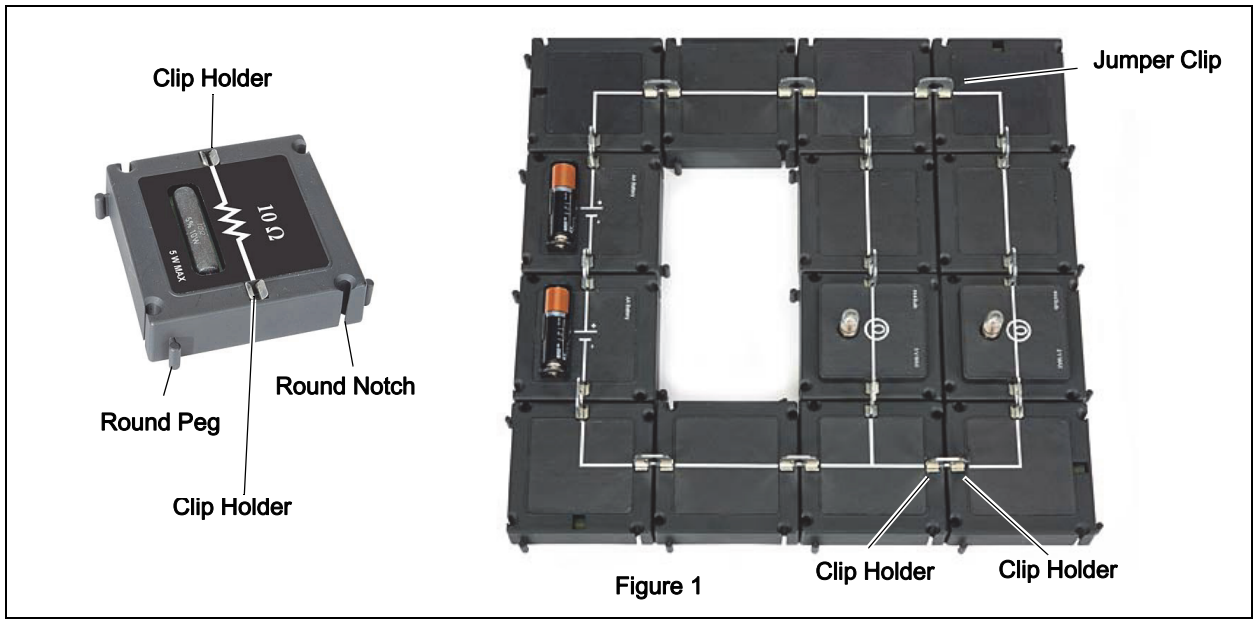
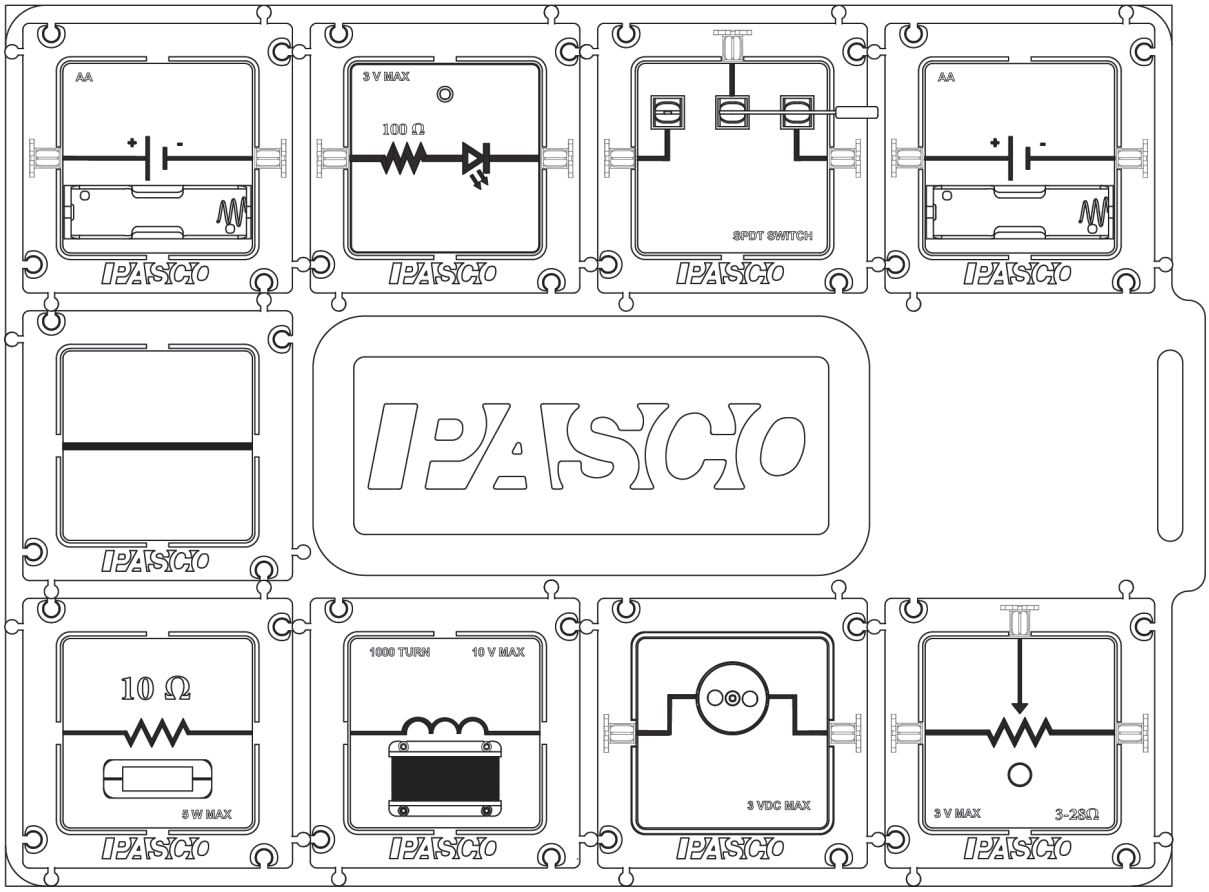


Figure 1

Storage: Bottom Layer (for taller modules)



Item	ID	Item	ID	Item	ID
Battery Holder Module	12	LED Module	13	SPDT Switch Module	14
Battery Holder Module	12	Straight Module	15	10 Ω Resistor Module	16
1000 Turn Coil Module	17	Motor Module	18	Potentiometer Module	19

Sensors

Using the Current Sensor Module and the Wireless Voltage Sensor requires PASCO software.

PASCO Capstone Software or SPARKvue Software

PASCO Capstone Software is best for Windows or Mac in physics and engineering laboratories. The site license allows students to use it at home. Use SPARKvue if you are on a mobile platform: iOS, Android, or Chrome.

Replacement Parts

Contact PASCO Technical Support regarding possible replacement parts.

Technical Support

For assistance with any PASCO product, contact PASCO at:

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

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

Web: www.pasco.com

Email: support@pasco.com

Limited Warranty

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

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.

Battery Disposal Instructions:

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 Lithium Polymer (Li-Poly) rechargeable battery used in this product is marked with the International symbols to indicate the need for the separate collection and recycling of batteries

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Li-Poly