

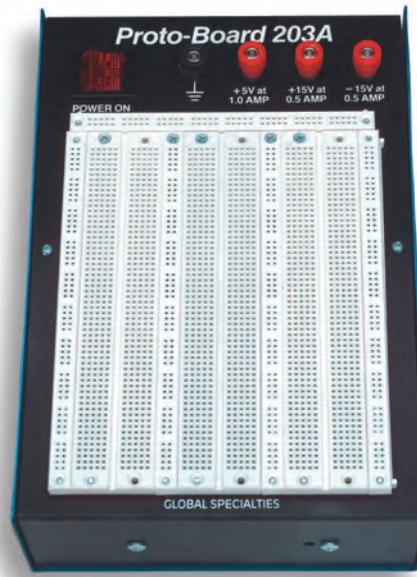
# Trainer Series

## Electronic Trainers

### PB-203A Powered Breadboard

Use the PB-203A to construct a wide variety of experiments, including but not limited to:

Opto-Device Circuits  
Clocks  
Multivibrators  
Oscillator Circuits  
Timers  
Function Generator Circuits  
Logic Circuits  
Gates  
Counters  
Flip-Flops  
Analog-to-Digital Converters  
Digital-to-Analog Converters  
Medium Scale Integration Circuits  
Phase Lock Loops  
Operational Amplifier



#### Features:

- Combines utility of a Proto-Board with highly capable regulated DC power supplies
- Housed in a rugged metal case
- Triple output power supply, 5V @1A, +15V & -15V @ 500mA
- Up to (24) 14-pin DIP IC capacity
- Includes three new GS-830, 830 Tie-point Solderless Breadboards & one new GS-080, 80 Tie-point Bus Strip
- 3-year warranty on all parts and workmanship.

The PB-203A is a durable powered breadboard capable of being used to design a multitude of analog, digital, logic and microcomputer circuits.

The PB-203A's on-board power supply eliminates the need for an external supply, adding more versatility to circuit design and experiments, as well as saving valuable bench space by eliminating the need for an external prototyping power supply. Due to its ample sized breadboarding area, the PB-203A is ideally suited to allow for the breadboarding of virtually any type of circuitry, from TTL, CMOS and ECL, to op-amps, audio, comparators, video amps, microprocessor components, phase locks and more.

The PB-203A's breadboarding area is comprised of Global's "Premium" solderless breadboards and is backed by an industry leading 3-year warranty.

Global Specialties powered breadboards are an important part of the necessary tools required to enable engineers and technicians to train for careers in the rapidly growing field of electronics technology.



Innovative Training Solutions

www.itm.com

1.800.561.8187

information@itm.com

## Powered Breadboard

# Trainer Series

## Electronic Trainers

### Specifications

Model	
PB-203A	
<b>Input power Source</b>	AC Line: 110/120VAC @ 60Hz, or 210-220VAC @ 50Hz
<b>Power Supplies</b>	<p><b>Fixed:</b> +5V +/-0.2VDC, 1.0A max, current limited Load Regulation better than 0.8% +/- 0.02%/°C Ripple, &lt;4mVp-p @ 1A</p> <p><b>Fixed:</b> +15VDC, Load Regulation better than 1% +/- 0.04%/°C, Ripple less than 10mVp-p @ 0.5A</p> <p><b>Fixed:</b> -15VDC Load Regulation better than 1% +/- 0.04%/°C Ripple less than 10mVp-p @ 0.5A</p>
<b>Binding Posts</b>	(1) Black: Chassis Ground (3) Red: Power Supply Outputs +5VDC, +15VDC & -15VDC
<b>Breadboards</b>	2250 Tie points with (8) 100 pin and (2) 80 pin power rails and accommodates up to 24 (14 pin) IC's
<b>Weight</b>	5lbs 5 oz (2.5kg)
<b>Dimensions</b>	9.8 x 6.6 x 3.3" (249 x 167 x 86.7mm)

Technical data subject to change without notice.

### Optional Accessories

**WK-1:** Jumper Wire Kit, 350 pieces  
**WK-2:** Jumper Wire Kit, 140 pieces

**WK-3:** Jumper Wire Kit, 70 pieces  
**WK-4:** Wire Jumper Kit, 100 wires with machined tips

**GSPA Series:** Prototyping adapters

**GSPA-K1:** Surface Mount to DIP Adapter Kit, 6 adapter boards

**GSPA-K2:** Surface Mount to DIP Adapter Kit, 11 adapter boards

**GSA-3185:** Minipro Test Clip Set



*Innovative Training Solutions*

© 2010 Global Specialties

[www.itm.com](http://www.itm.com)

[information@itm.com](mailto:information@itm.com)

1.800.561.8187