



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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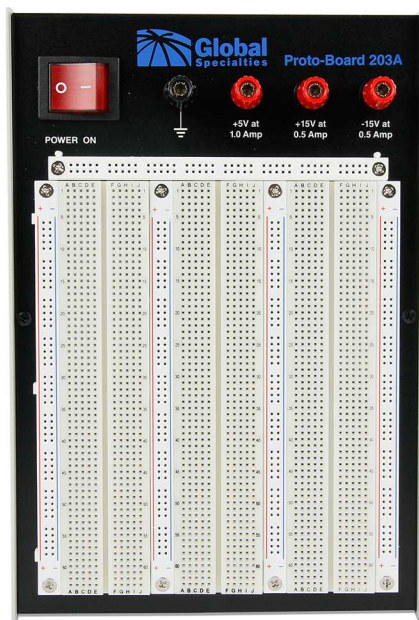




# Trainer Series

## Electronic Trainers

### PB-203A Powered Breadboard



#### 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 fixed, & +15V & -15V @ 500mA internally variable
- 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.

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



Innovative Training Solutions

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

## Powered Breadboard

### Specifications

Model	
	<b>PB-203A</b>
<b>Input power Source</b>	AC Line: 110/120VAC @ 60Hz, or 210-220VAC @ 50Hz
<b>Power Supplies</b>	<b>Fixed:</b> +5V +/-0.2VDC, 1.0A max, current limited Load Regulation better than 0.8% +/- 0.02%/°C Ripple, <4mVp-p @1A <b>Variable DC:</b> Factory Set to +15VDC, with internal adjustment +5.5 to 18VDC, 0.5A max@ +15VDC Load Regulation better than 1% +/- 0.04%/°C, Ripple less that 10mVp-p @ 0.5A <b>Variable DC:</b> Factory Set to -15VDC Load Regulation better than 1% +/- 0.04%/°C Ripple less that 10mVp-p @ 0.5A
<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 x3.3" (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

