

# Circuit Design Trainer

PB-507



## Description:

Global Specialties Circuit Design Trainer, model PB-507, is a powerful, versatile tool for circuit designers, engineers, technicians, students, and hobbyists. All digital controls, USB port, and a wide choice of built-in circuit accessories allow for rapid and accurate construction of virtually any type of analog or digital circuit.

The PB-507's LCD displays the settings for the active module selected. Simply touch a control element and the LCD switches to that module and displays its settings. Use the USB connection on the PB-507 to control or view the module's values from a PC. Using this feature you can project the controls to a large viewing screen for a classroom to observe and follow.

The breadboard area is the largest in our trainer family and is removable for easy replacement.

The PB-507 is designed to withstand the toughest treatment. It is constructed with the highest quality components for many years of reliable service. The all-digital circuitry allows for easy function verification and calibration.

The PB-507 is backed by Global Specialties' industry leading 3-year warranty.

## Applications:

Opto-Device Circuits

Clocks

Multivibrators

Oscillator Circuits

Timers

Function Generators 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:

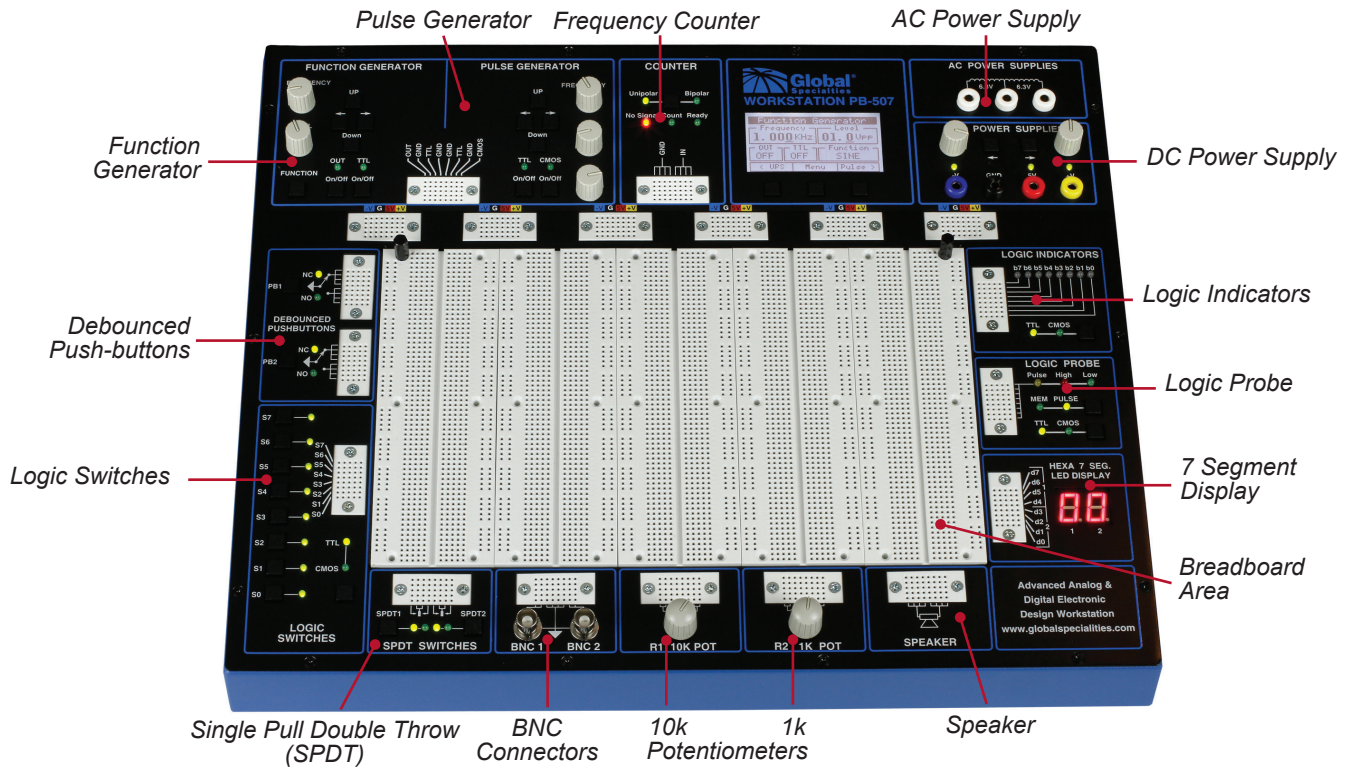
- LCD displays the settings from each active module
- USB connection enables viewing and controlling from a PC
- Choose your power source: 6.3 / 12.6 VAC power, 5 V DC or variable  $\pm 20$  VDC
- Draw power from banana plug connections or the tie-point power supplies above each breadboard bus strip
- Powerful 1 MHz bandwidth function generator with sine, triangle, and square wave outputs
- Pulse generator operates like a second, independent function generator where you can modify the duty cycle between 10 to 90%
- Frequency Counter module reports on the output of your own specially designed circuits
- Flush-mounted, removable circuit breadboard with over 4,100 contact points
- Analog & digital optional courseware available (Model PB-507LAB)
- Input power source, AC line switchable between:
  - 110 - 120V @ 60 Hz
  - 220 - 240 V @ 50 Hz
- 3-Year Warranty

Specifications and appearance subject to change without notice  
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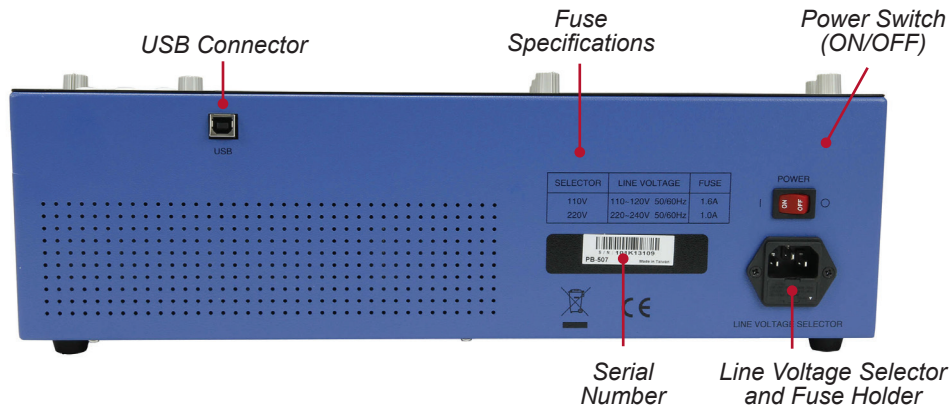
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## Front Panel

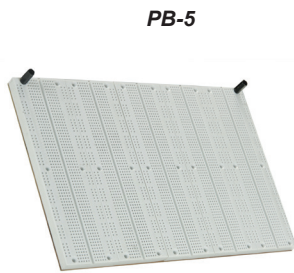


## Rear Panel



## Accessories

Many additional classroom parts are available (examples below)



Replacement Breadboard for multiple student use



Jumper Wire kit for large classroom use

### Included with PB-507



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## Specifications:

All specifications apply to the unit after a temperature stabilization time of 20 minutes over an ambient range of 20 °C ± 5 °C.

Model	PB-507
Power	3-wire AC Input with 110 V / 220 V (Selectable)
Power Supplies	Fixed DC: +5 VDC 1.0 A max. (current limited); Ripple, <5 mV Variable + DC: +1.3 VDC ±0.05 V @ 150 mA to +15 VDC @ 500 mA, Ripple < 5 mV Variable - DC: -1.3 VDC ±0.05 V @ 150 mA to -15 VDC @ 500 mA, Ripple < 5 mV Fixed AC: 12.6 V Center-tapped @ 100 mA
Computer Interface	USB 2.0
Function Generator	0.1 Hz to 1 MHz, Selectable in 7 Ranges Output Voltage: 0 a +10 V (20 Vp-p) Output Impedance: 600 Ω Output Waveforms: Sine, Square, Triangle & TTL
Pulse Generator	Frequency Range: 0.1 Hz to 1 MHz in 7 Ranges Output Mode: TTL or CMOS (Switchable) Output Voltage: 0 to 14 Vp-p Duty Cycle Range: 10 to 90 %
Frequency Counter	Frequency Range: 0.1 Hz to 1 MHz
LCD Display	LCD Displays: Reads, Volts, Amps & Frequency
7 Segment Display	2 BCD to 7-Segment Display Circuits
Logic Indicators	8 Bicolor LEDs: 4 Red (High) & 4 Green (Low)
Logic Probe	TTL or CMOS (Selector switch)
Logic Switches	8 Individual Logic Switches
Speaker	0.25 W, 8 Ω
Debounced Pushbuttons	2 Debounced Pushbuttons / Pulsers with Open Collector Output
Switches	2 Single Pull Double Throw (SPDT)
BNC Connector	2 BNC Connectors
Potentiometer	1K & 10K Uncommitted
Breadboard	4,150 Tie-points, Removable
Voltage Distribution Bus	Tied directly to Power Supplies Outputs
Dimensions	16.5" x 5.5" x 12.75" (W x H x D)
Weight	14 .5 lbs
Included Accessories	PC Software, Manual, Power Cord, USB, Calibration Adapter
Optional Accessories	Jumper Wire Kits: WK-1 (350 pc), WK-2 (140 pc), WK-3 (70 pc), WK-4 (100 wires with machined tips) & GSA-3185 (MiniPRO Test Clip Set, 10 colors)
Warranty	3 Years

## Contact Information:

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PB-507ALAB



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