# Trainer Series

## *Electronic Trainers*

# PB-500 **Analog Circuit Trainer**

**Use the PB-500 to construct a wide variety of experiments, including but not limited to:**

Opto-Device Circuits
Multivibrators
Oscillator Circuits
Timers
Function Generator Circuits
Logic Circuits
Analog-to-Digital Converters
Digital-to-Analog Converters
Phase Lock Loops
Operational Amplifiers


**Features:**

- Ideal for analog circuit design and experimentation
- Compact design for easy storage
- Includes built-in Function Generator
- Fixed quad output DC power supplies
- Built in function generator
- Premium breadboarding area with 8 power rails
- Audio experimentation speaker
- Optional courseware available
- 3-year warranty on all parts and workmanship.

**The Model PB-500 Analog Circuit Trainer is a compact, portable analog circuit design trainer with built-in power supplies and function generator. It can be used for analog circuit design and classroom training. The PB-500's unique combination of built-in functions and uncommitted devices makes it one of the most convenient breadboarding systems available. The trainer contains all of the functions required for studying and experimenting with active filters, operational amplifiers and other analog circuitry and is powered by a UL approved wall-mount power adapter. Utilizing the PB-500, students will learn valuable hands-on breadboarding techniques and build a solid foundation in circuit experimentation, construction and analysis.**

**Experienced designers will also find the PB-500 an invaluable, capable and reliable instrument, suitable for the most advanced and demanding analog design applications.**

**Global Specialties trainers provide the most complete platform required to enable engineers and technicians to train for careers in the rapidly growing field of electronics technology.**

Global® Specialties

*Innovative Training Solutions*

**www.globalspecialties.com**

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# Analog Circuit Trainer

## Specifications

| Model | PB-500 |
|---|---|
| **Input power Source** | Regulated wall mount adapter with outputs of +/-12VDC @ 200mA, 5VDC @ 250mA |
| **Power Supplies** | Fixed - 12VDC @ 200mA +/- 5%<br>Fixed - (-)12VDC @ 200mA +/- 5%<br>Variable - 0 to 7.5VDC @ 50mA +/- 10%<br>Variable 0 to (-) 7.5VDC @ 50mA +/- 10% |
| **Function Generator** | Frequency: Factory set to 1Khz. Variable with use of external capacitor from 0.1Hz to 100Khz<br>Sine Wave: 4V pk to pk in 10k ohm load<br>Triangle Wave: 9V pk to pk in 10k ohm load<br>Square Wave: 8V pk to peak in 10k ohm load<br>TTL: Logic "0" @ 0.3V max, Logic "1" @ 1.4V min in TTL load. Rise and fall times less than 1µsec<br>Duty Cycle: 50% for all Waveforms |
| **Slide Potentiometers** | (2) 1K & 10K |
| **Slide Switches** | (3) Single Pull Double Throw Type |
| **Connectors** | 2 ea BNC |
| **Speaker** | 8 Ω, 0.25 W |
| **Breadboards** | 840 tie points with (8) 25 pin power rails and accommodates up to 8 (14 pin) ICs |
| **Weight** | 1 lb, 10oz (Minus Adapter) (0.5 kg) |
| **Dimensions** | 10 x 7.5 x 2.6" (254 x 190 x 66 mm) |

Technical data subject to change without notice.

## Optional Accessories

**Courseware:** Available separately or as a package (Model PB-500 Lab).
**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

The **PB-500 Lab** package offers comprehensive course instruction covering the following areas:

- Fundamentals of Electricity
- Ohm's Law
- Series Circuits, Parallel Circuits
- Combinational Circuits
- Current Control
- Closed, open, shorts
- Switches
- Thevenin's Theorem
- Wheatstone Bridge
- Capacitors, Inductors
- Phase Shift Circuits
- Impedance
- Resonant Circuits
- Transformers
- Rectifiers & Filtering
- Integrated Circuits
- Transistor Amplifiers
- Oscillators

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