

DL-010 Combinational Logic Trainer



Some of the logic circuits that can be implemented with this trainer include, but are not limited to:

2-to-4 decoder with and without enable

- 3-to-8 decoder with and without enable
- 2-to-1 multiplexer
- 4-to-1 multiplexer
- 8-to-1 multiplexer
- Full adder
- 4-bit adder
- 4-bit

adder/subtractor

- 4-bit carry-look-ahead
- 2-bit ALU
- 8-to-3 Encoder
- Comparator
- Shifter

• 4-bit BCD to 7-segment decoder

• Any custom combinational circuit as derived from a truth table with up to four inputs

- Many custom combinational circuits with more than four inputs

Global Specialties is proud to introduce the first in its series of embedded systems design trainers. The DL-010 teaches students the basics of combinational digital logic design, which is the foundation of microprocessor and microcontroller designs. With the DL-010, all necessary logic components are included and pre-mounted for fast, easy implementation of combinational logic circuits, which are used as the building blocks of microprocessors. These circuits include multiplexers, decoders, encoders, full adders, adders/subtractors, comparators, and ALU's.

A 72-page professionally written lab manual is included with the trainer, which can be used directly in labs to supplement the theory taught in an introductory digital logic course.

Our logic trainer simplifies the teaching process by eliminating the need to discretely wire IC's as all gate elements are pre-mounted, de-coupled and de-bounced, ready for immediate classroom use. Students can spend their time directly on logic training. Most importantly, the trainer includes a 72-page professionally written training manual featuring an overview of digital logic and 70 corresponding hands-on exercises enhancing any textbook currently in use. The DL-010 is a complete and ruggedly packed trainer that will provide a solid learning platform to individuals and classroom students.

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Features:

- 70-page professionally written lab manual authored by university professor, Enoch Hwang, PhD.
- 70 hands-on exercises correlated to an introductory digital logic course.
- Sturdy blow molded carrying case making the entire lab lightweight and portable.
- Attractive and easy to use system draws students in to the beauty of digital logic and embedded systems design.
- Complete kit with 9V wall adapter and 100 machined pin hookup wires. No need to buy anything else.
- All gate elements are pre-mounted and fully integrated.
- Expandable breadboard allows the system to grow as students' knowledge increases.
- Perform experiments using standard TTL logic.
- Well regulated 5V power (Vcc) and ground (GND) points.
- Each gate element is presented in its easy to visualize graphic form.

SIGNAL TEST
New & Used Test Equipment

Combinational Logic Trainer

Specifications

Model DL-010	
Not gate	12
2-Input AND gate	12
4-Input AND gate	8
2-Input OR gate	8
4-Input OR gate	8
2-Input XOR gate	12
LEDs	8
7-Segment LED display	1
Slide switch	8
Push Button switch	1
270 tie point Bread Board	yes
Vcc & GND tie points	yes
Hook up wire, 100pcs	yes
9V wall adaptor	yes
Regulated 5V supply	yes
DL-010 Manual	yes
Width	13.5 in
Length	8.5 in
Height	3.5 in
Weight	3.40 lbs

Training Manual

- Chapter 1** Combinational Logic Design Trainer
 - Model DL-010
- Chapter 2** Microprocessors
 - Introduction to Microprocessors
 - Combinational and Sequential Circuit Analogy
- Chapter 3** Digital Logic Circuits
 - Basic Logic Gates
 - Digital Circuits
 - Identifying Combinational Circuits
 - Analysis of Combinational Circuits
 - Boolean Algebra
 - Simplifying Combinational Circuits
 - Synthesis of Combinational Circuits
- Chapter 4** Labs
 - Basic Gates, Lights and Action!
 - NAND, NOR, XOR, AND XNOR Gates
 - Designing Combinational Circuits
 - Multiplexers
 - Decoders
 - Comparators
 - Full Adder
 - 4-bit Adder
 - 4-bit Adder/Subtractor
 - 2-bit Arithmetic and Logic Unit (ALU)
 - BCD to 7-Segment LED Decoder



WARRANTY

