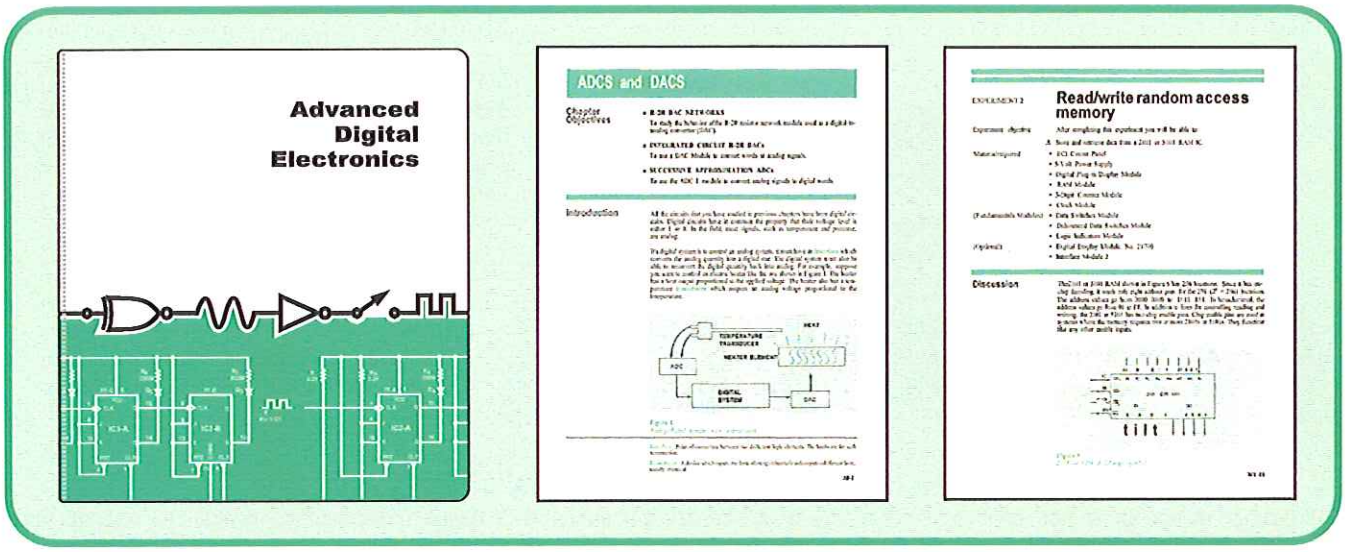
ADVANCED DIGITAL ELECTRONICS



The expanding world of digital electronics has created the need for a program in advanced topics. Minimizing techniques, adders, counters, frequency dividers, DAC/ADC, memory, multiplexers and applications are all included.

The Model 217SB Training System, "Advanced Digital Electronics" is an add-on to the "Digital Electronic Fundamentals" system to provide a broader understanding of this topic. This program includes a combined text and laboratory manual, instructor's guide, digital modules with storage board, and all of the required accessories.

THE LAB MANUAL 21701 B

The ECI lab manual is designed to help the student develop a thorough understanding of the subject matter. The text is written in easy-to-read vocabulary, minimizing reading requirements. Each chapter states an objective, discusses the concept, then provides hands-on experiments so students learn by doing. The Lab manual is illustrated with large, detailed photographs, circuit layout, oversize schematics and diagrams. Two-color printing is used throughout for emphasis and easy comprehension.

System Familiarization
Trainer Inventory
Circuit Modules
Circuit Construction Techniques

Circuit Simplification Techniques
Boolean Algebra
Karnaugh Mapping
DeMorgan's Theorems and Alternative Gate Symbols

Adders and Comparators
Half Adders
Full Adders
Digital Comparators

Shift Registers
Parallel In/Parallel Out
Serial In/Parallel Out
Parallel In/Serial Out
Serial In/Serial Out

Counters
Modulo-N Counters
Up/Down Counters
Three-Digit BCD/Binary Counters

Frequency Dividers and Monostable Multivibrators
Frequency Dividers
Monostable Multivibrators
Pulse-Width Discriminators

ADCs and DACs
R-2R DAC Networks
Intergrated Circuit R-2R DACs
Successive Approximation ADCs

Multiplexers and Demultiplexers
Four-Line to One-Line Multiplexers
One-of-Four Demultiplexers
Data Selectors

Memory
Register Memory
Read/Write Random Access Memory

Digital Circuit Applications
Frequency Meters
Digital Voltmeters
Programmable Generators

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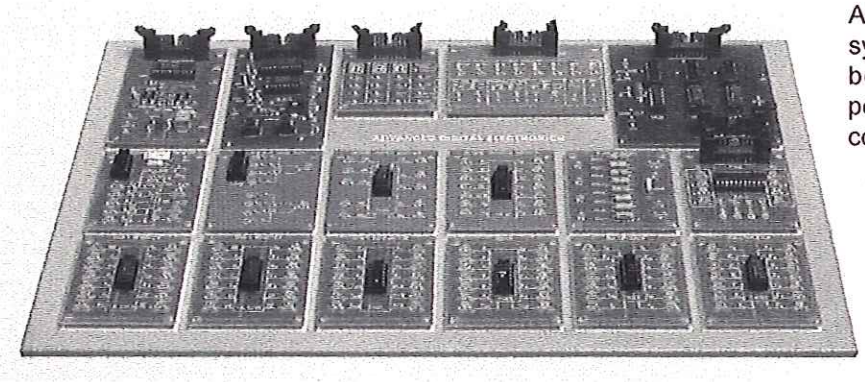
SYSTEM HARDWARE



KEYED STORAGE BOARDS

All digital modules for the 217-SB training system are keyed to an organized storage board. Imprinted outlines of modules permit quick inventory. Storage board is color-keyed to the system lab manual.

DIGITAL PLUG-IN COMPONENTS (21702 B)

All plug-in modules shown on the storage board above are constructed of rugged commercial grade PC boards that plug into the circuit panel. For added flexibility and convenience, ICs are socket mounted. These modules include:

- 1 Clock Module
- 1 Digital Display Module
- 1 Decade Up/Down Counter Module
- 1 Decade Ripple Counter Module
- 1 Dual 4-Input NAND Gate Module
- 2 Shift Register Module (4 Bit)
- 1 Monostable Multivibrator Module
- 1 DAC Module
- 1 ADC 1 Module
- 1 R-2R Network Module
- 1 Full Adder Module (4Bit)
- 1 Comparator Module (4Bit)
- 1 RAM Module (1K)
- 1 Multiplexer Module (Dual 4 to 1)
- 1 Demultiplexer Module (Dual 4 to 1)
- 1 3-Digit Counter Module
- 1 Silk Screened Storage Board

Accessory PACKAGE (21705A)

A complete package of one 2.5" and two 18" ribbon cables with 16-pin mass termination connectors and a storage box are included.

INSTRUCTOR'S GUIDE (21703 B)

A comprehensive instructor's guide and answer manual is included with the 217SB training system.

OPTIONAL ACCESSORIES

CIRCUIT PANEL

The ECI transparent Circuit Panel used with all ECI training systems is in use in thousands of educational and industrial applications for basic circuit set-up and advanced electronic design. The circuit panel is completely flexible and suitable for any general breadboarding work. The patented design eliminates soldering, jiffy clips, snap fasteners, or random layout on opaque wiring boards.

The15200 Circuit Panel has150 phosphor bronze contact islands enclosed in clear plastic. Each island matches five holes through the top surface for insertion of mounted and unmounted components and standard hook-up wire. The ECI circuit panel provides 750 contacts and measures 14-11/16 L x 9-5/8 W x 1/2 T.

The 23500 Circuit Panel Easel is designed to hold the 15200 Circuit Panel at a five degree angle for ease of circuit building. A white plastic base provides maximum visibility. The base lifts out to reveal a roomy storage compartment for program materials. 16-1/2 x 11-3/4 x 3-5/16 x 1-3/16.

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