



# Electricity-Electronics Trainer

## Ed-Lab 651



### TOPICAL MATERIAL BASIC TO ADVANCED

- Fundamental concepts
  - DC circuits
  - Electrical devices
  - Magnetism
  - AC voltages
- Capacitors and Inductors
- Diodes and Transistors
  - AC circuits
  - Solid-State devices
  - Amplifiers
- Power Supplies
- Industrial electronics
- AM/FM communications
- Pulses and Waveshaping
- Digital and Linear ICs
- Vacuum tubes
- Operational Amplifiers
- Instrumentation
- Control circuits

The Ed-Lab Electricity-Electronics Training System enables students to perform hundreds of experiments in basic, intermediate and advanced electronics.

With competency-based lab experiments.

An easily-managed self-contained trainer. Parts do not get lost and will not burn out.

Students work hands-on with full size professional banana leads for circuit wiring resulting in a successful working program.

### THE EASILY MANAGED LAB

The proven reputation of the Ed-Lab Training System provides for an efficient, well managed classroom.

The student's and instructor's time and energies can't be wasted looking for parts, keeping inventory, or trying to get circuits working with lost or inoperative parts. These discouraging experiences result in slow progress, too many disruptions and especially a difficult, if not impossible, time for the teacher.

The Ed-Lab Training System solves this uncontrolled classroom environment with components, power supplies, meters and generators that are self-contained and burn out proof. This results in steady progress, good student attitudes and top performance.

### MOUNTED COMPONENTS & RUGGED EQUIPMENT

The Ed-Lab components are mounted on a rugged eighth-inch aluminum panel and use full size professional quality banana jacks and leads for totally dependable connections.

- |                |                 |
|----------------|-----------------|
| Resistors      | Transistors     |
| Switches       | FET, MOSFET     |
| Potentiometers | UJT, SCR        |
| Lamps          | Triac, Diac     |
| Photocell      | Diodes          |
| Capacitors     | Zener, Varactor |
| Inductors      | Op-Amp          |
| Transformer    | Loudspeaker     |

### EVERYTHING PROTECTED AGAINST DAMAGE

The Ed-Lab Trainer is designed so that supplies and components will not burn out due to any incorrect wiring on the panel.

### EXPANDABLE & FLEXIBLE FOR HANDS-ON SKILLS

Sockets for ICs and PC cards enable expansion to advanced topics and connection to student skills projects. These include ICs and optional projects with loose components and electrical tools.



### DEPENDABLE CES SERVICES, PLANS & PROPOSALS

CES can prepare for your consideration a complete proposal presenting program topics and curricula tailored to your needs including equipment lists and budgetary costs for a rugged and economical system to fit your educational requirements. You can be assured that our equipment, software, customer support, and continuing service will result in you having a most successful program.

### ALL SELF-CONTAINED INSTRUMENTATION

Support test instruments are conveniently mounted on the trainer panel and include:

DC POWER SUPPLIES (six) regulated with fixed and variable, positive and negative fully protected outputs.

AC POWER SOURCE with two phases for power supply experiments.

WAVEFORM GENERATOR with sine, square and triangle outputs, from 1 Hz to 100 KHz. Variable sine wave amplitude.

METER for basic experiments plus DC Voltage Ranges, DC Current shunts, AC Voltage Ranges which include a high-impedance input for the AC circuit experiments.

### OPTIONAL PLUG-IN MODULES

- COMMUNICATIONS
- CONTROLS
- STUDENT PROJECTS
- PARTS AND TOOLS



The trainer contains a printed circuit socket to accept optional plug-in modules. See Series CES 300 list of available items.



### FROM INDIVIDUAL TRAINERS TO A COMPLETELY INSTALLED CLASSROOM

CES provides and installs complete labs with student furniture, test instruments, skill projects, computers, and all manuals of instruction.

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