

Electric Vehicle (EV) Training Systems

Recommended EV Equipment, Trainers, and Simulators
to update High School Automotive Programs.



Learning Labs, Inc.

Serving Career and Technical Education since 1967





Model 610

Vehicle Technology Trainer

The Vehicle Technology Trainer uses a late model “recycled” vehicle. This trainer can be setup as a gas, diesel, electric, or hybrid option. This example shown with a Nissan Leaf.



Cut out panels added to show important systems normally hidden by interior panels

- Study and diagnosis most automobile systems including:

- Engine Performance
- Electrical/Electronic
- Suspension/Steering
- Brake
- Heating/Air Conditioning
- Transmission



- Includes an A Tech Fault/Simulator Panel
- Perform actual service manual diagnostic procedures
- Courseware Included





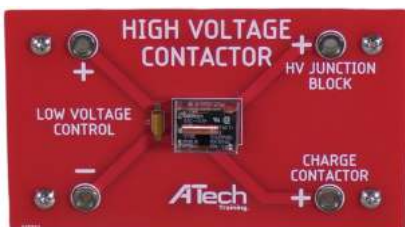
Electric Vehicle Systems Trainer

Model 5820

The Electric Vehicle Systems Trainer was developed to introduce your students to EV systems with simulated components that are found on today's electric vehicles. With low voltage simulation, this trainer introduces students to the fundamentals without the danger of working with active high-voltage systems. It allows you to build mock EV circuits that will engage and challenge your students.

Features:

- Simulated High Voltage Components (24V MAX)
- Wall Charging Capable
- Battery Monitoring
- Low Voltage and High Voltage Systems Included



Specialized Components:

- DC to AC Invertor
- Contactors
- HV Junction Blocks
- DC to DC Converter
- Synchronous AC Drive Motor
- High Voltage Battery Pack
- Low Voltage Battery Pack



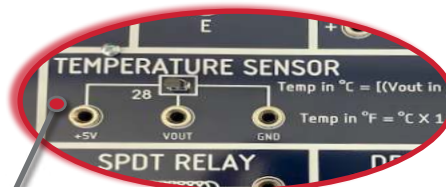
Electrical Skill Development Troubleshooting

Model 5810TT

Electrical Skill Development Troubleshooting (ESD TT) provides an in-depth, hands-on study of automotive electricity and electronics. Allows for troubleshooting skill development and competency testing. The internal fault board offers different computer-controlled hard faults. Both serial and parallel circuits can be configured to perform the activities in the ESD TT courseware.

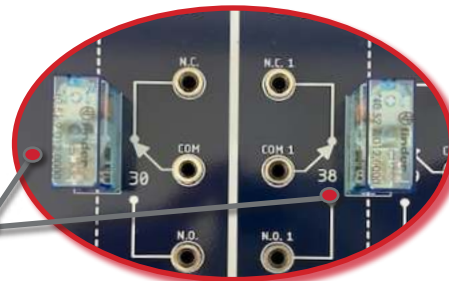
Features:

- ~ Optional submounts can be added to create customized circuits
- ~ Courseware included: Student Manual and Instructor Guide
- ~ Classroom Management Program (CMP) compatible
- ~ Network display and storage of student's performance
- ~ Fault insertion with keypad or A Tech Lab System (ALS)



Specialized Circuits:

- ~ DC to AC voltage inversion
- ~ DC motor generator
- ~ Force sensitive resistor
- ~ Precision temperature sensor
- ~ Clear relays (observe contact movement!)



Applied Electrical Trainer (Model 4810)



Optional Storage Case Available.



The Applied Electrical Trainer presents the study of electricity and electrical circuits. This training unit also has the flexibility to allow instructors to create their own circuits and/or tests for measurement and evaluation.

Optional Submounts and Storage Case available.



The Applied Electrical Trainer contains the following components and capabilities:

- Connector wires in three colors
- Auxiliary jacks for optional submounts
- Includes Student Manual and Instructor Guide

- Voltage
- Current
- Resistance

- Series Circuits
- Parallel Circuits
- Series-Parallel Circuits

- Power
- Voltage Drop
- Diagnostic Testing

- Meter Usage Including Prefix Conversion
- Ohm's Law Relationships / Calculations



Electromechanical Trainer (Model 4820)

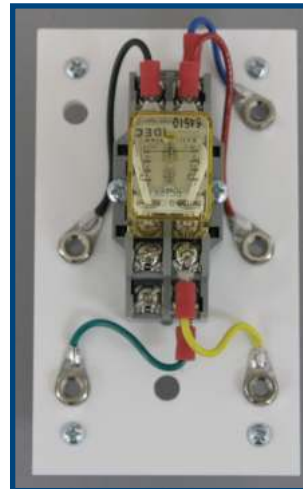


Optional Storage Case Available.



The Electromechanical Trainer presents the study of electrical and mechanical circuits. This training unit also has the flexibility to allow instructors to create their own circuits and / or tests for measurement and evaluation.

Optional Submounts and Storage Case available.



Includes: Clear Case Relay & Socket
500-008-006

The Electromechanical Trainer contains the following components and capabilities:

- Connector wires in five colors
- Auxiliary jacks for optional submounts
- Includes Student Manual and Instructor Guide

- Relay Operation
- Magnetic Fields
- Electrical Generator

- Power
- Voltage Drop
- Diagnostic Testing

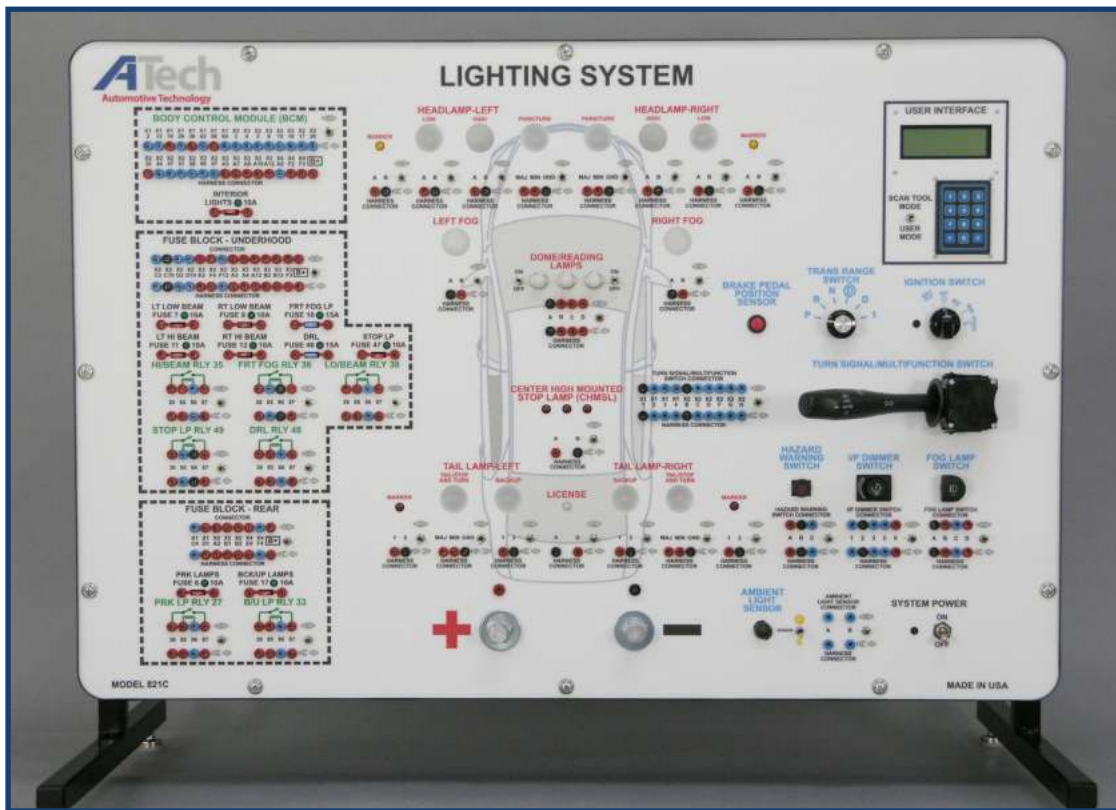
- Series Circuits
- Parallel Circuits
- Series-Parallel Circuits

- Voltage
- Current
- Resistance

- Meter Usage
- Ohm's Law Relationships / Calculations



Lighting System (model 821C)



The ATech Lighting System Trainer (model 821C) is designed to teach computer and network-controlled automotive lighting system operation. This trainer allows for instructor demonstration, student hands-on reinforcement, and troubleshooting practice. Powered by a 12VDC automotive battery or a 12VDC/10AMP (minimum) power supply (not included). The Lighting System is based on a CAN platform vehicle.

Features:

- New vehicle components, connectors, and factory wire colors
- Provides an advanced level of instruction by duplicating actual on-vehicle troubleshooting procedures
- Intermittent and hard faults can be inserted using the Instructor's Management Program (IMP) via a computer connected to the trainer or over the ATech Lab System (ALS)
- Hard faults can be inserted by using the built-in keypad on the Lighting System Trainer
- Ability to perform actual service manual test procedures
- Compatible with Instructor's Management Program (IMP)
- Courseware includes Instructor Guide, Student Manual, and Service Manual Information
- Battery posts are protected against polarity reversal
- Includes external power supply for uninterrupted fault operation
- User interface displays built-in scan tool data



Power Window System (Model 840C)



The ATech Power Windows System Trainer (model 840C) is designed to teach computer and network controlled automotive power window operation. This trainer allows for instructor demonstration, student hands-on reinforcement and troubleshooting practice. Powered by a 12VDC automotive battery or a 12VDC/23A power supply (not included). The Power Windows System is based on a CAN platform vehicle.

Features:

- New vehicle components, connectors, and factory wire colors.
- Provides an advanced level of instruction by duplicating actual on-vehicle troubleshooting procedures.
- Intermittent and hard faults can be inserted using the Instructor Management Program (IMP) via a computer connected to the trainer or over the ATech Network System (ANS).
- Hard faults can be inserted by using the built in keypad on the Power Windows System Trainer.
- Ability to perform actual service manual test procedures.
- Compatible with ATech's Instructor Management Program (IMP).
- Courseware includes Instructor Guide, Student Manual, and Service Manual Information.
- Battery posts are protected against polarity reversal.
- Includes internal power supply for uninterrupted fault operation.



Power Door Lock System (Model 850C)



The ATech Power Door Lock Trainer (model 850C) is designed to teach computer and network controlled automotive door lock and theft deterrent system operation. This trainer allows for instructor demonstration, student hands-on reinforcement and troubleshooting practice. Powered by a 12VDC automotive battery or a 12VDC/23A power supply (not included).

Features:

- New vehicle components, connectors, and factory wire colors.
- The key fob can be used to lock and unlock the doors.
- Built-in horn (buzzer).
- Provides an advanced level of instruction by duplicating actual on-vehicle troubleshooting procedures.
- Intermittent and hard faults can be inserted using the Instructor Management Program (IMP) via a computer connected to the trainer or over the ATech Lab System (ALS).
- Hard faults can be inserted by using the built in keypad on the Power Door Lock System Trainer.
- Ability to perform actual service manual test procedures.
- Compatible with ATech's Instructor Management Program (IMP).
- Courseware includes Instructor Guide, Student Manual, and Service Manual Information.
- Battery posts are protected against polarity reversal.
- Includes internal power supply for uninterrupted fault operation.
- User interface displays built-in scan tool data.



Drum / Disc Brake (4-Wheel) (Model 400)



Features:

- Recycled drum / disc brakes
- Operating hydraulic system
- Includes:
 - » Power assist
 - » Parking brake
 - » Electrical circuits
 - » Wheel bearings
- Real world system skills and knowledge
- Powder-coated frame
- Courseware included



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