

AUTOMOTIVE TROUBLESHOOTING TRAINERS

Charging System

Hampden's **Model H-AUTO-ICS** provides training in the principles of automotive charging systems, displaying both internal and external voltage regulators. Simplified techniques are demonstrated to pinpoint problems in automotive charging systems.

Testing Capabilities

- Battery
- Battery Cables
- Alternator Drive Belt
- Charging System – Volts
- Voltage Regulator
- Voltage Run Test
- Voltage Regulator
- Electrical Connections

Storage Battery

Hampden's **Model H-AUTO-SB** provides training on testing automotive batteries utilizing hand held digital multimeters.

Testing Capabilities

- Normal Battery Operation
- Battery Status
- Battery Capacity
- Battery Terminals
- Battery Charging
- Battery Drain Test
- Voltage Drop from Battery to Load
- Battery Testing
- Jump Start Vehicle from Another Vehicle
- Battery Cell Testing

Braking System

Hampden's **Model H-AUTO-BS** demonstrates brake system fundamentals, featuring disc and drum brake theory and repair.

Testing Capabilities

- Master Cylinder
- Brake System Metering Valve
- Rear Drum Brakes
- Self Adjusting Drum Brakes
- Emergency Brake
- Front Disc Brake
- Spongy Brake Pedal
- Power Brake

Cooling System

Hampden's **Model H-AUTO-CS** demonstrates cooling system fundamentals, troubleshooting and repair. Radiator status is presented.

Testing Capabilities

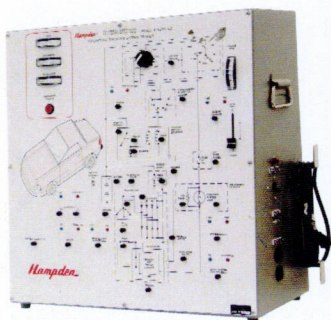
- Coolant Capacity
- Water Pump Drive Belt
- Radiator Cap
- Coolant Mixture
- Radiator Hose
- Water Pump
- Coolant Leak
- Radiator
- Thermostat Test
- Fan
- Electrical Control

Starting System

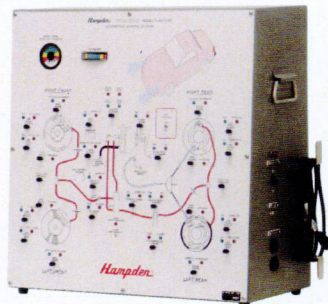
Hampden's **Model H-AUTO-SS** provides training in the use of digital multimeters to pinpoint problems in automotive starting systems.

Testing Capabilities

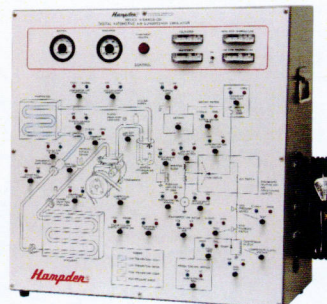
- Battery
- Battery Cables
- Ignition Switch
- Neutral Safety Switch
- Starter Motor Solenoid
- Starter Motor
- Slow Cranking
- Fusible Link
- Power Train Module
- Flywheel
- Charging
- Engine Ignition
- Power Train
- Fuel



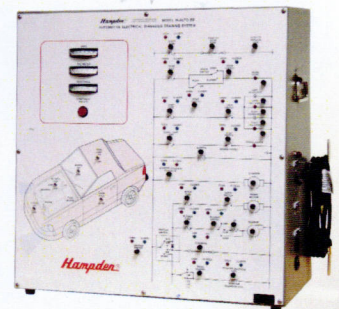
MODEL H-AUTO-ICS
Automotive Charging System Simulator



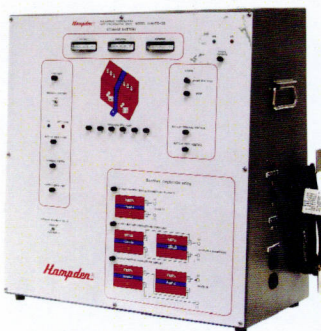
MODEL H-AUTO-BS
Automotive Braking System Simulator



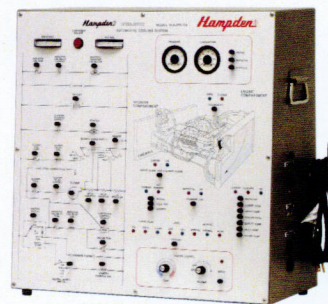
MODEL H-AUTO-CS
Automotive Cooling System Simulator



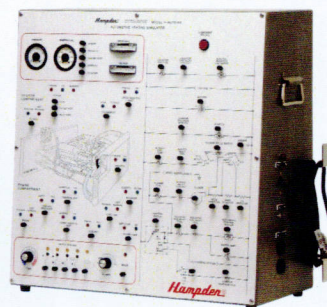
MODEL H-AUTO-ED
Automotive Electrical Diagnosis Simulator



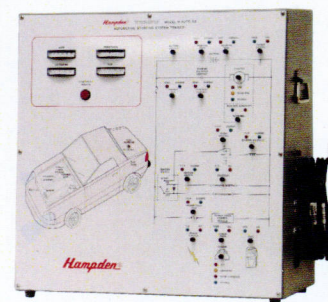
MODEL H-AUTO-SB
Automotive Storage Battery Simulator



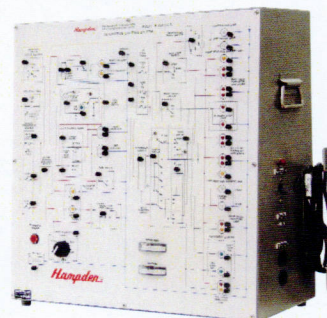
MODEL H-AUTO-AH
Automotive Heating Simulator



MODEL H-AUTO-SS
Automotive Starting System Simulator



MODEL H-AUTO-LS
Automotive Lighting System Simulator



MODEL H-AUTO-FDS
Automotive Fuel Delivery System Simulator

Standard Products...Designed

State-of-the-Art Classroom Training

Air Conditioning

Hampden's **Model H-DAACS-CSI** demonstrates the principles of operation and troubleshooting of current factory installed AC systems.

Testing Capabilities

- Suction, discharge, pressure and temperature gauges
- Built-in voltage and continuity probes
- Adjustable ambient temperature control
- Three-speed fan control and LPCO control
- Adjustable RPM control

Automotive Heating

Hampden's **Model H-AUTO-AH** demonstrates procedures used to repair automotive heating systems.

Testing Capabilities

- Duct Delivery
- Heater Blower
- Control
- Heater Core
- Thermostat

Lighting System

Hampden's **Model H-AUTO-LS** demonstrates the application of basic electrical theory to troubleshoot automotive lighting systems.

Testing Capabilities

- Power Distribution
- Light Switch
- Head Lamps
- Turn and Hazard Light
- Rear Backup Lamps
- Front Parking Lamps
- Daytime Running Lamps
- Fog Lamps

Electrical Diagnosis

Hampden's **Model H-AUTO-ED** emphasizes applying the basics of electricity to troubleshooting automotive electrical and electronic systems.

Testing Capabilities

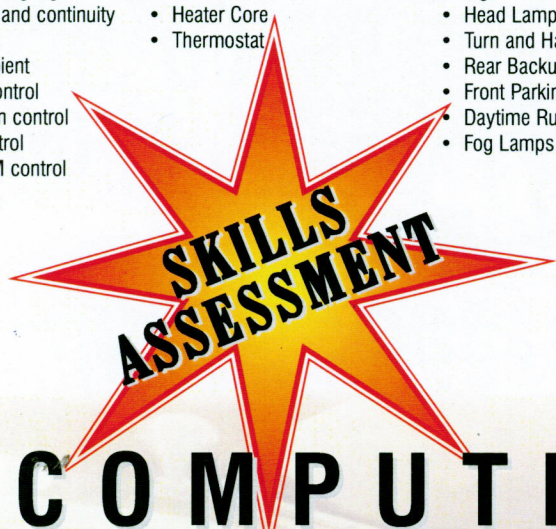
- Battery Test
- Charging System
- Short in a Circuit
- Open
- Identify Component Cluster
- Pinpointing Shorts to Ground
- Pinpointing Opens in Circuit
- Select Faults
 - No Dome Light
 - No Brake Light
 - No Lights
 - No Blower
 - No Wipers
 - Slow Cranking
 - Won't Start

Fuel Delivery System

Hampden's **Model H-AUTO-FDS** trains the student to pinpoint the problem area and make the proper repair.

Testing Capabilities

- Fuel Tank foreign matter
- Internal Fuel Pump
- External Fuel Pump
- Restricted Fuel Filter
- Pressure Regulator Test
- Select Faults
 - Carburated
 - Fuel Filter Plugged
 - Mechanical Pump Failure
 - Fuel Sock Plugged
 - Idle Adjustment
 - Fuel Tank Empty
 - Fuel Injected
 - PCM Failure
 - Fuel Filter Plugged
 - Fuel Pump Failure
 - Fuel Rail-Fuel Injector Pulsing



COMPUTER AIDED DESKTOP TRAINERS

Individual Student Assessment Capabilities

Standard Features

- SCHEMATIC AND PICTORIAL TEST POINTS
- SPECIFICATION CHART
- IMPROPER EQUIPMENT USE WARNING
- COMPONENT ISOLATE SWITCH
- MALFUNCTION INDICATION
- WINDOWS DIGITAL CONTROL SYSTEM



Real-Time Performance

Hampden's line of **Computer Assisted Panel Instruction Modules** have been designed to provide realistic System Operation & Troubleshooting functions to virtually **ANY CLASSROOM!** Each module's front panel is silkscreened with a complete schematic & pictorial layout of all system operations and combined with actual test-point pushbuttons, LEDs and meters.

All units are controlled via a PC computer using supplied Hampden software and USB I/O Interface.

Realistic Problem Solving in the Classroom

All Instruction Modules have the capability of inserting system specific Mechanical & Electrical malfunctions—singly or in multiples. This gives students the added experience of resolving realistic problem situations which would otherwise be very difficult for an instructor to create in a classroom.

to Meet Your Growing Needs!