

H-AESS-1

Automotive Electrical System Simulator

Purpose

The Hampden **Model H-AESS-1** Automotive Electrical System Simulator demonstrates the principles and troubleshooting techniques on a Ford Fusion (other models available).

The left side of the panel contains the Input Sensors screens with test buttons.

The right side of the panel contains the Output Actuators screens with test buttons.

The center of the panel contains the ECU Processing screen with test buttons.

Each test button will display the voltage output on a connected wire on the corresponding screen.

Certain vehicle components, when faulted, will trigger an OBD II code readable with a scan tool.

Testing Capabilities

Hampden's **Model H-AESS-1** provides training in the principles of automotive diagnostics.

- Control Locking System
- Wiper/Washer System
- Crankshaft Sensor System
- Air Bag Deployment System
- Fuel Injection System
- Ignition System
- Head Light System
- Brake Light System
- Power Seat System
- Memory Seat System
- Power Window System
- Cylinder Head Temperature (CHT) Sensor System
- Instrument Cluster System
- Brake Fluid Level System
- Heated Rear Window System
- Heated Seat System
- Rear Window Blind System
- Manifold Absolute Pressure (MAP) Sensor System
- Power Steering System
- Accelerator System
- Manual Climate Control System
- Horn System



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Real-Time Performance

Hampden's line of Computer Assisted Panel Instruction Modules has been designed to provide realistic System Operation & Troubleshooting functions to virtually ANY CLASSROOM! This module's front panel is silkscreened with a display of all system interactions and combined with actual test-point pushbuttons and LEDs. The interactions of the circuits are displayed on screen.

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

Realistic Problem Solving in the Classroom

All system circuits have the capability of inserting faults to vehicle components to affect the circuit in a specific way. 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.

Standard Features

- Wiring diagram for each circuit
- Replicate circuits or build custom variants
- OBD II Interface Port
- Improper Equipment Use Warning
- Power Indicator Lamp

Standard Faults

- Open Component
- Shorted Component
- Crankshaft Missing Tooth
- Engine Overheating (CHT)
- MAP Sensor Pressure High
- MAP Sensor Pressure Low

Options

- AESS-TM (Toyota Module)
- AESS-VWM (Volkswagen Module)

All Hampden units are available for operation at any voltage or frequency

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