

# Troubleshooting Expansion Systems

99-FTSAB53, 99-FTSDRV1, 99-FTSMC1, 99-FTSS712



Adds FaultPro software and Circuit Board to select, previously-purchased 990 learning systems

Adds to:

- 99-FTSAB53
- 99-FTSDRV1
- 99-FTSMC1
- 99-FTSS712



Also includes additional multimedia curricula and Student Reference Guides

## Key Features:

- Teach Real-World Troubleshooting Skills
- Teach and Evaluate Troubleshooting Skills Using Amatrol's Faultpro, the Premier Electronic Fault Insertion Software on the Market
- Troubleshooting Curriculum
- Student Reference Guide

Amatrol's Portable Troubleshooting Learning System Upgrades (99-FTS) add troubleshooting skills and curriculum to select portable systems. Each of these upgrades includes a fault controller, curriculum covering industry-applicable troubleshooting topics and skills, and Amatrol's FaultPro software, the industry's premier electronic fault insertion software. FaultPro allows instructors to instantly set faults to test a learner's weaknesses and teach troubleshooting to turn them into strengths. These real-world troubleshooting skills will help learners to build confidence and competency when encountering equipment failures in industrial settings.

These troubleshooting upgrades can be added to the following portable learning systems: Allen-Bradley AB5300 PLC (990-PAB53), Siemens S71200 PLC (990-PS712), AC Variable Frequency Drives (990-DRV1), and Electric Motor Control (990-MC1). These upgrades will be installed at Amatrol's corporate headquarters in Jeffersonville, Indiana.



## Technical Data

Complete technical specifications available upon request.

**990-PAB53 Upgrade: 99-FTSAB53**  
Fault Controller Enabling Electronic Faults  
Proprietary FaultPro Software  
Interactive Multimedia Curriculum (M11143)  
Instructor's Guide (C11143)  
Installation Guide (D11143)  
Student Reference Guide (H11143)

### Additional Requirements:

Portable PLC Learning System - Allen-Bradley AB5300 (990-PAB53)  
Computer, see requirements: <http://www.amatrol.com/support/computer-requirements>  
Customer supplied shipment to and from Amatrol for installation

**990-DRV1 Upgrade: 99-FTSDRV1**  
Fault Controller Enabling Electronic Faults  
Proprietary FaultPro Software  
Interactive Multimedia Curriculum (M11153)  
Instructor's Guide (C11153)  
Installation Guide (D11153)  
Student Reference Guide (H11153)

### Additional Requirements:

Portable AC Variable Frequency Drives Troubleshooting Learning System (990-DRV1)  
Computer, see requirements: <http://www.amatrol.com/support/computer-requirements>  
Customer supplied shipment to and from Amatrol for installation

**990-MC1 Upgrade: 99-FTSMC1**  
Computer-Based Fault Controller Board With Faults

Proprietary FaultPro Software  
Interactive Multimedia Curriculum (M11152)  
Instructor's Guide (C11152)  
Installation Guide (D11152)  
Student Reference Guide (H11152)

### Additional Requirements:

Portable Electric Motor Control Troubleshooting Learning System (990-MC1)  
Computer, see requirements: <http://www.amatrol.com/support/computer-requirements>  
Customer supplied shipment to and from Amatrol for installation

**990-PS712 Upgrade: 99-FTSS712**  
Fault Controller Enabling Electronic Faults  
Proprietary FaultPro Software  
Student Curriculum (B40080)  
Optional eBook Curriculum (E40080)  
Instructor's Guide (C40080)  
Installation Guide (D40080)  
Student Reference Guide (H40080)

### Additional Requirements:

Portable PLC Troubleshooting Learning System - Siemens S71200 (990-PS712)  
Computer, see requirements: <http://www.amatrol.com/support/computer-requirements>  
Customer supplied shipment to and from Amatrol for installation

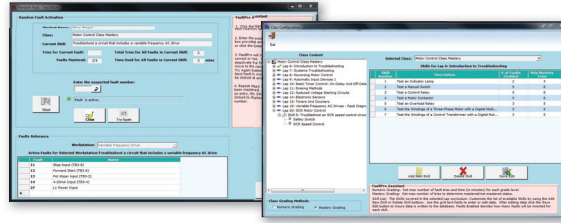
## Real-World Troubleshooting using Electronic Fault Insertion!

These expansions include FaultPro, an electronic fault insertion system that is only available from Amatrol, to insert faults into each respective system for troubleshooting. During the learning process, FaultPro allows learners to insert faults into the system as they progress through the step-by-step procedures learning industrial troubleshooting methods. These systems include a variety of electrical and mechanical faults on components like

stepper motors, variable frequency drives (VFD), drum switches, and power supplies.

## FAULTPRO™

COMPUTER-BASED FAULT INSERTION

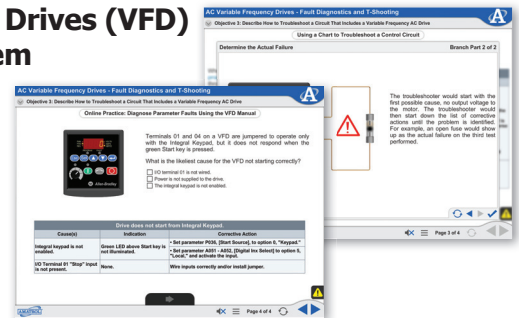


## Portable PLC Troubleshooting Learning Systems

Portable PLC Troubleshooting for Allen-Bradley AB5300 and Siemens S71200 PLCs cover PLC power supply troubleshooting, systems troubleshooting, analog input/output troubleshooting, and analog application troubleshooting. Learners will practice skills like using a six-step sequence to troubleshoot a PLC system, testing analog input and output devices, testing a stepper motor, and many more!

## Portable AC Variable Frequency Drives (VFD) Troubleshooting Learning System

Portable AC Variable Frequency Drives Troubleshooting uses multimedia curriculum to cover fault detection and troubleshooting. Learners will practice skills like determining faults based on the fault display of a VFD, troubleshooting parameter setting of a VFD, and troubleshooting a circuit that includes a VFD.



## Portable Electric Motor Control Troubleshooting Learning System

Portable Electric Motor Control Troubleshooting's multimedia curriculum covers control component, motor starter, and power component troubleshooting, as well as motor control circuits and system troubleshooting. Learners will engage in hands-on skills like troubleshooting a two-wire control system, a reversing motor control circuit, a motor control circuit with manual and automatic modes, and a motor control circuit that uses a timer.



## Student Reference Guide

Sample copies of a Student Reference Guide are included with each learning system. Sourced from the system's curriculum, the Student Reference Guide takes the entire series' technical content contained in the learning objectives and combines them into one perfectly-bound book. Student Reference Guides supplement courses by providing a condensed, inexpensive reference tool that learners will find invaluable once they finish their training making it the perfect course takeaway.

